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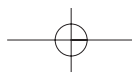
NTSC/PAL

General Catalog 2005

# Broadcast and Professional Equipment

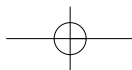
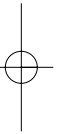
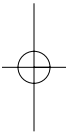
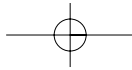


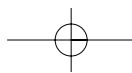
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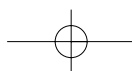
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## HD Cameras

# HDC1000 Multi-format HD Camera

The HDC1000 is the multi-format HD studio camera that offers a broad choice of interlace and progressive formats, great picture quality, and enhanced operational flexibility. It incorporates a newly developed CCD imager and DSP LSI - two key devices that allow the HDC1000 to achieve ultimate picture performance in a variety of scanning modes. The new CCD can accommodate all existing interlace and progressive scan formats ranging from 1080/50i and 1080/60i to 1080/24P.(\*) And as a future-protected device, it can also capture stunning 1080/60P images - as well as deliver highest-quality 720/50P and 720/60P images for operations today.(\*)

### Features

- Newly developed three 2/3-inch type 2.2-megapixel HD progressive CCD
- High-sensitivity of F10
- Excellent signal-to-noise ratio of 54 dB
- A wide variety of capturing modes - 1080/50i, 1080/60i, 1080/24P, 1080/25P, 1080/30P, 1080/60P, 720/50P, 720/60P
- Industry-first 14-bit A/D conversion
- State-of-the-art DSP LSI
- Ergonomic design
- Optical fiber digital transmission
- Memory Stick storage of camera setup parameters
- Servo-controlled ND and CC filters

(\*1) Also accepts 1080/59.94i and 1080/23.976P. (\*2) 1080/60P and 1080/50P signals can be output from the HDC1000 camera head.



### Supplied Accessories

- Operation manual (1)
- Front cover (1)
- Number plate for side panel (2)
- Belt for cable clamp (2)
- Angle adjustment fitting (2)

### Optional Accessories

- HDCU1000 Camera Control Unit
- HDCU1500 Camera Control Unit
- HDTX100 HD Triax Adaptor (Fischer type)
- HDTX100 HD Triax Adaptor (Kings type)
- MSU-900 Master Setup Unit
- MSU-950 Master Setup Unit
- CNU-500 Camera Command Network Unit
- CNU-700 Camera Command Network Unit
- HDVF-700A 7-inch Type HD B/W CRT
- Viewfinder
- HDVF-C750W Multi-format HD Color LCD
- Viewfinder
- HDVF-9900 9-inch Type HD Color CRT
- Viewfinder
- BKP-7911 Script Holder

### Specifications

#### General

##### Mass

Approx. 20 kg (44 lb 9 oz, without VF and lens)

##### Operating temperature

-20 to +45 °C (-4 to +113 °F)

#### Camera

##### Pickup device

3-CCD 2/3-inch type 16:9

##### Effective picture elements (H x V)

1920 x 1080

##### Spectrum system

F1.4 prism system

### Built-in filters

- 1: Clear, 2: 1/4ND, 3: 1/8ND, 4: 1/16ND, 5: 1/64ND
- A: CROSS, B: 3200K, C: 4300K, D: 6300K, E: 8000K

### Servo filter control

Yes

### Lens mount

Sony hanger mount

### Sensitivity

F10 at 2000 lx (3200K, 89.9% reflectance)

### Minimum illumination

10 lx (F1.4, +12 dB gain up)

### Signal-to-noise ratio

54 dB (typical)

### Horizontal resolution

1000 TV lines

### Dynamic range (1080/60i mode)

600%

### Registration

Within 0.02% (all zones, without lens)

### Shutter speed selection

1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s (1080/60i mode), 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s (1080/50i mode)

### Modulation depth

45% or more horizontally (800 TV lines at center, 27.5 MHz, with typical lens)

### Input connectors

#### Audio in (CH-1)

XLR-3-31 type (1, female), mic or line selectable

#### Audio in (CH-2)

XLR-3-31 type (1, female), AES/EBU or mic or line selectable

#### Return control

6-pin (1)

#### DC in

XLR-4-pin type (1)

### Output connectors

#### Test out

BNC type (1), 1.0 Vp-p, 75 Ω

#### HD SDI out

BNC type (2)

#### DC out

4-pin (1), 10.5 to 17 V max. 1.5 A

#### AC utility out

Yes (Output connector differs by region.)

### Input/output connectors

#### CCU

Optical fiber connector

#### Lens

36-pin

#### Viewfinder

D-sub 25-pin

#### Remote

8-pin

#### Prompter

BNC type (1), 1.0 Vp-p, 75 Ω

#### Tracker

10-pin: Tracker R/T, R/G Tally, unregulated

12 V

#### Crane

12-pin, Y/Pb/Pr, Trunk data I/O, Serial Data

#### Intercom

XLR-5-pin (2, female)

## HD Cameras

# HDC1500 Multi-format HD Camera

The HDC1500 is a multi-format HD portable camera that offers a broad choice of interlace and progressive formats, great picture quality, and enhanced operational flexibility. It incorporates a newly developed CCD imager and DSP LSI - two key devices that allow the HDC1500 to achieve ultimate picture performance in a variety of scanning modes. The new CCD can accommodate all existing interlace and progressive scan formats ranging from 1080/50i and 1080/60i to 1080/24P.(\*) And as a future-protected device, it can also capture stunning 1080/60P images - as well as deliver highest-quality 720/50P and 720/60P images for operations today.(\*)



Lens and viewfinder are optional.

### Features

- Newly developed three 2/3-inch type 2.2-megapixel HD progressive CCD
- High-sensitivity of F10
- Excellent signal-to-noise ratio of 54 dB
- A wide variety of capturing modes - 1080/50i, 1080/60i, 1080/24P, 1080/25P, 1080/30P, 1080/60P, 720/50P, 720/60P
- Industry-first 14-bit A/D conversion
- State-of-the-art DSP LSI
- Ergonomic design
- Compact and lightweight: approx. 4.5 kg (9 lb 14 oz)
- Optical fiber digital transmission
- Versatile interfaces: two HD-SDI outputs, one digitally down-converted SD-SDI output
- Memory stick storage of camera setup parameters
- Servo-controlled ND and CC filters

(\*)1) Also accepts 1080/59.94i and 1080/23.976P. (\*)2) 1080/60P and 1080/50P signals can be output from the HDC1000 camera head.

### Supplied Accessories

Operation manual (1)  
Lens cap (1)  
Label for assignable switch (1)

### Optional Accessories

HDCU1000 Camera Control Unit  
HDCU1500 Camera Control Unit  
HDVF-20A 2-inch Type HD B/W CRT Viewfinder  
HDLA1500 Large Lens Adaptor (CE)  
HDLA1500 Large Lens Adaptor (UC)  
HDVF-C30W Multi-format HD Color LCD Viewfinder  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit  
CAC-6 Return Video Selector  
CAC-12 Camera Microphone Holder  
VCT-14 Tripod Adaptor  
HDTX100 HD Triax Adaptor (Fischer type)  
HDTX100 HD Triax Adaptor (Kings type)

### Specifications

#### General

Mass  
Approx. 4.5 kg (9 lb 14 oz, without VF and lens)  
Operating temperature  
-20 to +45 °C (-4 to +113 °F)

#### Camera

Pickup device  
3-CCD 2/3-inch type 16:9  
Effective picture elements (H x V)  
1920 x 1080  
Spectrum system  
F1.4 prism system

### Built-in filters

1: Clear, 2: 1/8ND, 3: 1/8ND, 4: 1/16ND, 5: 1/64ND  
A: CROSS, B: 3200K, C: 4300K, D: 6300K, E: 8000K

### Servo filter control

Yes

### Lens mount

Sony bayonet mount

### Sensitivity

F10 at 2000 lx (3200K, 89.9% reflectance)

### Minimum illumination

10 lx (F1.4, +12 dB gain up)

### Signal-to-noise ratio

54 dB (typical)

### Horizontal resolution

1000 TV lines

### Dynamic range (1080/60i mode)

600%

### Registration

Within 0.02% (all zones, without lens)

### Shutter speed selection

1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s (1080/60i mode), 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s (1080/50i mode)

### Modulation depth

45% or more horizontally (800 TV lines at center, 27.5 MHz, with typical lens)

### Input connectors

#### Audio in (CH-1)

XLR-3-31 type (1, female), mic or line selectable

#### Audio in (CH-2)

XLR-3-31 type (1, female), AES/EBU or mic or line selectable

### Mic in (front)

XLR-3-31 type (1, female)

### Return control

6-pin (1)

### DC in

XLR-4-pin type (1)

### Output connectors

#### Test out

BNC type (1), 1.0 Vp-p, 75 Ω

#### HD SDI out

BNC type (2)

#### Earphone out

Mini-jack (1), 8 Ω

#### DC out

4-pin (1), 10.5 to 17 V max. 1.5 A

#### AC utility out

Yes (Output connector differs by region.)

### Input/output connectors

#### CCU

Optical fiber connector

#### Lens

12-pin

#### Viewfinder

20-pin

#### Remote

8-pin

#### Prompter

BNC type (1), 1.0 Vp-p, 75 Ω

#### Tracker

10-pin: Tracker R/T, R/G Tally, unregulated

#### 12 V

#### Crane

12-pin, Y/Pb/Pr, Trunk data I/O, Serial Data

#### Intercom

XLR-5-pin (2, female)

## HD Cameras

# HDC-900 Multi-format HD Camera

HD Cameras

### Features

- Multi-purpose studio/OB camera capable of both high-end HDVS and SDTV operations
- Incorporates three 2/3-inch type 16:9 FIT CCD imagers each with 2,200,000 pixels that conform to 1920(H) x 1080(V) CIF (Common Image Format)
- Can be switched to originate the CIF format at 24P, 25P or 30P progressive scan frame rates, or at 50i and 60i interlaced field rates
- Standard definition also available: 480/60i and 480/30P in widescreen or 4:3 mode, or 576/50i and 576/25P in 4:3 mode
- Full digital processing with 12-bit A/D converter and Advanced Digital Signal Processor (ADSP) for excellent picture quality
- Excellent signal-to-noise ratio of 54dB
- Wide dynamic range of 600 %
- High sensitivity of F10 at 2000 lx
- High horizontal resolution of 1000 TV lines
- Automatic set-up
- Five position ND filter and CC filter
- Electronic shutter function
- Clear Scan and Extended Clear Scan (in interlaced modes only)
- Three-channel Skin Tone Detail Correction
- Variable linear matrix
- Memory Stick function to store and recall personal camera setup parameters and VF settings
- Fully compatible with Sony's New Generation Camera Control Units
- Optical fiber transmission system enables high quality video transfer at a long distance
- Advanced filing system with MSU-700A/750
- Low profile body design
- Viewfinder lock system
- VF menu display
- Various display functions on viewfinder such as box cursor, center marker and safety zone
- Rotary type optical fiber connector
- Both HD lens and NTSC lens can be used



### Supplied Accessories

Angle adjustment brackets (2)  
Front cover (1)  
Number plates for up tally (1)  
Number plates for side panel (2)  
Number plates for back tally (1)  
Cable clamp (2)  
Operation manual (1)  
Installation & maintenance manual (1)

### Optional Accessories

RM-B750 Remote Control Unit  
HDCU-900 Camera Control Unit  
HDVF-700A 7-inch Type HD B/W CRT Viewfinder  
HDVF-C700W Multi-format HD Color LCD Viewfinder  
VFH-770 7-inch Type Viewfinder Sports Hood  
BKP-7911 Script Holder  
BKP-7912 Script Holder  
CAC-6 Return Video Selector

### Specifications

#### General

Operating temperature:  
-20 °C to 45 °C (-4 °F to 113 °F)  
Storage temperature:  
-20 °C to 50 °C (-4 °F to 122 °F)  
Mass:  
Approx. 21kg (46 lb 5oz) (main unit only)

#### Imager

Imager:  
2/3-inch type frame interline transfer CCD  
Method:  
3-CCD, RGB

Effective resolution:

1920 (H) x 1080 (V)

#### Optical system specifications

Spectral system:

f1.4 prism

Built-in filters:

Color temperature conversion filters:

A: cross filter  
B: 3200K (clear)  
C: 4300K  
D: 6300K  
E: 8000K  
ND filters:  
1: clear  
2: 1/4 ND  
3: 1/8 ND  
4: 1/16 ND  
5: 1/64 ND

#### Electrical characteristics

Sensitivity:

F10.0 (at 2000 lx with 89.9% reflectivity)

Image signal-to-noise ratio:

54 dB or more

Horizontal resolution:

1000 TV lines (at center of screen)

45 +10/-5% (27.5 MHz)

Registration:

0.02% for total area (not including lens distortion)

Geometric distortion:

Negligible (not including lens distortion)

Input connectors:

DC IN (4-pin) x 1  
RET CONTROL (6-pin) x 1

AUDIO IN CH-1, CH-2 (XLR 3-PIN, male (1 each)

For MIC: -60 dBs (may be selected to -20 dBs by view finder menu or HDCU-900 operations), balanced

For LINE: -20 dBs, balanced

#### Output connectors

TEST OUT (BNC type) x 1  
1.0 Vp-p, 75  $\Omega$  terminated  
PROMPTER (BNC type) x 1  
1.0 Vp-p, 75  $\Omega$  terminated  
AC OUT (100V AC) x 1  
HD SERIAL OUT 1.5 Gb/s x 1  
VF (D-sub 25-pin) x 1  
DC OUT (4-pin) x 1  
DC 12V, 5W

#### Input/output connectors

CCU (Electro-optical connector) x 1  
VTR (26-pin) x 1  
TRACKER (20-pin) x 1  
REMOTE (8-pin multi-connector x 1  
INTERCOM 1 and 2 (XLR 5-pin) x 1

## HD Cameras

# HDC-910 Multi-format HD Camera

### Features

- Multi-purpose studio/OB camera capable of both high-end HDVS and SDTV operations
- Incorporates three 2/3-inch type 16:9 IT CCD imagers each with 2,200,000 pixels that conform to 1920(H) x 1080(V) CIF (Common Image Format)
- Can be switched to originate the CIF format at 50i and 60i interlaced field rates
- Standard definition also available: 480/60i in wide screen or 4:3 mode, or 576/50i in 4:3 mode
- Full digital processing with 12-bit A/D converter and Advanced Digital Signal Processor (ADSP) for excellent picture quality
- Excellent signal-to-noise ratio of 54dB
- Wide dynamic range of 600 %
- High sensitivity of F10 at 2000 lx
- High horizontal resolution of 1000 TV lines
- Automatic set-up
- Five position ND filter and CC filter
- Electronic shutter function
- Clear Scan and Extended Clear Scan (in interlaced modes only)
- Three-channel Skin Tone Detail Correction
- Variable linear matrix
- Memory Stick function to store and recall personal camera setup parameters and VF settings
- Fully compatible with Sony's New Generation Camera Control Units
- Optical fiber transmission system enables high quality video transfer at a long distance
- Advanced filing system with MSU-700A/750
- Low profile body design
- Viewfinder lock system
- VF menu display
- Various display functions on viewfinder such as box cursor, center marker and safety zone
- Rotary type optical fiber connector
- Both HD lens and NTSC lens can be used



HD Cameras

### Supplied Accessories

Angle adjustment brackets (2)  
 Front cover (1)  
 Number plates for up tally (1)  
 Number plates for side panel (2)  
 Number plates for back tally (1)  
 Cable clamp (2)  
 Operation manual (1)  
 Installation & maintenance manual (1)

### Optional Accessories

RM-B750 Remote Control Unit  
 HDVF-700A 7-inch Type HD B/W CRT Viewfinder  
 HDVF-C700W Multi-format HD Color LCD Viewfinder  
 VFH-770 7-inch Type Viewfinder Sports Hood  
 BKP-7911 Script Holder  
 BKP-7912 Script Holder  
 CAC-6 Return Video Selector

### Specifications

#### General

Operating temperature:  
 -20 °C to 45 °C (-4 °F to 115 °F)  
 Storage temperature:  
 -20 °C to 50 °C (-4 °F to 122 °F)  
 Mass:  
 Approx. 21kg (46 lb 5oz) (main unit only)

#### Imager

Imager:  
 2/3-inch type frame interline transfer CCD  
 Method:  
 3-CCD, RGB  
 Effective resolution:  
 1920 (H) x 1080 (V)

### Optical system specifications

Spectral system:  
 fl.4 prism  
 Built-in filters:  
 Color temperature conversion filters:  
 A: cross filter  
 B: 3200K (clear)  
 C: 4300K  
 D: 6300K  
 E: 8000K  
 ND filters:  
 1: clear  
 2: 1/4 ND  
 3: 1/8 ND  
 4: 1/16 ND  
 5: 1/64 ND

### Electrical characteristics

Sensitivity:  
 F10.0 (at 2000 lx with 89.9% reflectivity)  
 Image signal-to-noise ratio:  
 54 dB or more  
 Horizontal resolution:  
 1000 TV lines (at center of screen)  
 45 +10/-5% (27.5 MHz)  
 Registration:  
 0.02% for total area (not including lens distortion)  
 Geometric distortion:  
 Negligible (not including lens distortion)  
 Input connectors:  
 DC IN (4-pin) x 1  
 RET CONTROL (6-pin) x 1

AUDIO IN CH-1, CH-2 (XLR 3-PIN, male (1 each)

For MIC: -60 dBs (may be selected to -20 dBs by view finder menu or HDCU-900 operations), balanced  
 For LINE: -20 dBs, balanced

### Output connectors

TEST OUT (BNC type) x 1  
 1.0 Vp-p, 75  $\Omega$  terminated  
 PROMPTER (BNC type) x 1  
 1.0 Vp-p, 75  $\Omega$  terminated  
 AC OUT (100V AC) x 1  
 HD SERIAL OUT 1.5 Gb/s x 1  
 VF (D-sub 25-pin) x 1  
 DC OUT (4-pin) x 1  
 DC 12V, 5W

### Input/output connectors

CCU (Electro-optical connector) x 1  
 VTR (26-pin) x 1  
 TRACKER (20-pin) x 1  
 REMOTE (8-pin multi-connector x 1  
 INTERCOM 1 and 2 (XLR 5-pin) x 1

## HD Cameras

# HDC-930 Multi-format HD Camera

### Features

●HDC-900's full companion studio/OB camera capable of both high-end HDVS and SDTV operations ●Incorporates three 2/3-inch type 16:9 IT CCD imagers each with 2,200,000 pixels that conform to 1920(H) x 1080(V) CIF (Common Image Format) ●Can be switched to originate the CIF format at 50i and 60i interlaced field rates ●Standard definition also available (with CCU): 480/60i in widescreen or 4:3 mode, or 576/50i in 4:3 mode ●Full digital processing with 12-bit A/D converter and Advanced Digital Signal Processor (ADSP) for excellent picture quality ●Excellent signal-to-noise ratio of 54dB ●Wide dynamic range of 600% ●High sensitivity of F10 at 2000 lx ●High horizontal resolution of 1000 TV lines ●Automatic set-up ●Five position ND filter and CC filter ●Electronic shutter function ●Three-channel Skin Tone Detail Correction ●Variable linear matrix ●Memory Stick function to store and recall personal camera setup parameters and VF settings ●Fully compatible with Sony's New Generation Camera Control Units ●Optical fiber transmission system enables high quality video transfer at a long distance ●Advanced filing system with MSU-700A/750 ●Viewfinder lock system ●VF menu display ●Various display functions on viewfinder such as box cursor, center marker and safety zone ●Rotary type optical fiber connector ●Both HD lens and NTSC lens can be used



Lens and viewfinder are optional.

### Supplied Accessories

Operation manual (1)  
Installation & maintenance manual (1)

### Optional Accessories

RM-B750 Remote Control Unit  
MSA-A "Memory Stick" IC Memory Media  
C-74 Condenser Microphone  
BKP-L551 Li-ion Battery Adaptor  
CAC-6 Return Video Selector  
CAC-12 Camera Microphone Holder  
HDVF-20A 2-inch Type HD B/W CRT Viewfinder  
HDVF-C750W Multi-format HD Color LCD Viewfinder  
HDVF-C30W Multi-format HD Color LCD Viewfinder  
VCT-14 Tripod Adaptor

### Specifications

#### General

Power consumption:  
25 W (in stand-alone use, without options)  
Operating temperature:  
-20 °C to 45 °C (-4 °F to 113°F)  
Storage temperature:  
-20 °C to 50 °C (-4 °F to 122 °F)  
Mass:  
Approx. 5.1 kg (112 lb 7 oz)

#### Imager

Imager:  
2/3-inch type interline transfer CCD  
Method:  
3-CCD, RGB  
Effective resolution:  
1920 (H) x 1080 (V)

### Electrical characteristics

Sensitivity:  
f10.0 (at 2000 lx with 89.9% reflectivity)  
Image signal-to-noise ratio:  
54 dB or more  
Horizontal resolution:  
1000 TV lines (at center of screen)  
5% or higher modulation  
Registration:  
0.02% for total area (not including lens distortion)  
Geometric distortion:  
Negligible (not including lens distortion)

### Optical system specifications

Spectral system:  
F 1.4 prism  
Built-in filters:  
Color temperature conversion filters:  
A: cross filter  
B: 3200K (clear)  
C: 4300K  
D: 6300K  
E: 8000K  
ND filters:  
1: clear  
2: 1/4 ND  
3: 1/8 ND  
4: 1/16 ND  
5: 1/64 ND

### Input/output connectors

VTR (CCZ, 26-pin) x 1  
CCU (Electro-multi connector) x 1  
LENS (12-pin) x 1  
VF (20-pin) x 1  
MIC IN (XLR 3-pin, female) x 1  
Audio IN 1,2 (XLR 3-pin, female) x 1

EARPHONE OUT (Minijack) x 1  
8 Ω  
DC IN (XLR-4pin) x 1  
10.5 to 17 V DC  
DC OUT (4-pin x 1)  
10.5 to 17 V DC, 5 W maximum  
HD SERIAL OUT (BNC type) x 1  
INCOM1 and 2 (XLR 5-pin, female) x 1  
TEST OUT (BNC type) x 1  
GENROCK IN/RET IN/PROMPT OUT (BNC type) x 1  
1 Vp-p 75 Ω  
RET CONT (6-pin) x 1  
REMOTE (8-pin) x 1  
TRACKER (20-pin) x 1  
EXT I/O (20-pin) x 1

## HD Cameras

# HDC-950 Multi-format HD Camera

### Features

●HDC-900's full companion studio/OB camera capable of both high-end HDVS and SDTV operations ●Incorporates three 2/3-inch type 16:9 FIT CCD imagers each with 2,200,000 pixels that conform to 1920(H) x 1080(V) CIF (Common Image Format) ●Can be switched to originate the CIF format at 24P, 25P or 30P progressive scan frame rates, or at 50i and 60i interlaced field rates ●Standard definition also available: 480/60i and 480/30P in widescreen or 4:3 mode, or 576/50i and 576/25P in 4:3 mode ●Full digital processing with 12-bit A/D converter and Advanced Digital Signal Processor (ADSP) for excellent picture quality ●Excellent signal-to-noise ratio of 54dB ●Wide dynamic range of 600 % ●High sensitivity of F10 at 2000 lx ●High horizontal resolution of 1000 TV lines ●Automatic set-up ●Five position ND filter and CC filter ●Electronic shutter function ●Clear Scan and Extended Clear Scan (in interlaced modes only) ●Three-channel Skin Tone Detail Correction ●Variable linear matrix ●Memory Stick function to store and recall personal camera setup parameters and VF settings ●Fully compatible with Sony's New Generation Camera Control Units ●Optical fiber transmission system enables high quality video transfer at a long distance ●Advanced filing system with MSU-700A/750 ●Viewfinder lock system ●VF menu display ●Various display functions on viewfinder such as box cursor, center marker and safety zone ●Rotary type optical fiber connector ●Both HD lens and NTSC lens can be used



Lens and viewfinder are optional.

### Supplied Accessories

Operation manual (1)  
Installation & maintenance manual (1)

### Optional Accessories

HKC-T950 Sony HD CCD Block Adapter  
RM-B750 Remote Control Unit  
HDCU-900 Camera Control Unit  
HDVF-C30W Multi-format HD Color LCD Viewfinder  
MSA-A "Memory Stick" IC Memory Media  
C-74 Condenser Microphone  
BKP-L551 Li-ion Battery Adaptor  
CAC-6 Return Video Selector  
CAC-12 Camera Microphone Holder  
HDVF-20A 2-inch Type HD B/W CRT Viewfinder  
HDVF-C750W Multi-format HD Color LCD Viewfinder  
VCT-14 Tripod Adaptor

### Specifications

#### General

Power consumption:  
25 W (in stand-alone use, without options)  
Operating temperature:  
-20 °C to 45 °C (-4 °F to 113°F)  
Storage temperature:  
-20 °C to 50 °C (-4 °F to 122 °F)  
Mass:  
Approx. 5.1 kg (112 lb 7 oz)  
**Imager**  
Imager:  
2/3-inch type frame interline transfer CCD

#### Method:

3-CCD, RGB  
Effective resolution:  
1920 (H) x 1080 (V)

#### Electrical characteristics

Sensitivity:  
f10.0 (at 2000 lx with 89.9% reflectivity)  
Image signal-to-noise ratio:  
54 dB or more  
Horizontal resolution:  
1000 TV lines (at center of screen)  
5% or higher modulation  
Registration:  
0.02% for total area (not including lens distortion)  
Geometric distortion:  
Negligible (not including lens distortion)

#### Optical system specifications

Spectral system:  
F 1.4 prism  
Built-in filters:  
Color temperature conversion filters:  
A: cross filter  
B: 3200K (clear)  
C: 4300K  
D: 6300K  
E: 8000K  
ND filters:  
1: clear  
2: 1/4 ND  
3: 1/8 ND  
4: 1/16 ND  
5: 1/64 ND

#### Input/output connectors

VTR (CCZ, 26-pin) x 1  
CCU (Electro-multi connector) x 1  
LENS (12-pin) x 1  
VF (20-pin) x 1  
MIC IN (XLR 3-pin, female) x 1  
Audio IN 1,2 (XLR 3-pin, female) x 1  
EARPHONE OUT (Minijack) x 1  
8 Ω  
DC IN (XLR-4pin) x 1  
10.5 to 17 V DC  
DC OUT (4-pin) x 1  
10.5 to 17 V DC, 5 W maximum  
HD SERIAL OUT (BNC type) x 1  
INCOM1 and 2 (XLR 5-pin, female) x 1  
TEST OUT (BNC type) x 1  
GENROCK IN/RET IN/PROMPT OUT (BNC type) x 1  
1 Vp-p 75 Ω  
RET CONT (6-pin) x 1  
REMOTE (8-pin) x 1  
TRACKER (20-pin) x 1  
EXT I/O (20-pin) x 1

## HD Cameras

HD Cameras

# HDC-F950 Digital 4:4:4 HD Camera System

The HDC-F950 addresses the movie, commercial and high-end television production markets demanding highest possible HD picture quality and accurate color reproduction with its capability to output 4:4:4 digital RGB HD signal output. Extended dynamic range, a special gamma feature using a GUI based gamma editor, and a long exposure function are added to achieve more flexible and creative shooting and thus satisfy the needs from the high-end production markets. These features are especially invaluable to reproduce high-quality digital pictures requiring sharper chroma key images. The HDC-F950 retains fundamental features such as the proven 2/3-inch type, 2.2-million-pixel FIT CCD, 12-bit A/D converter realizing both excellent picture quality and low-power consumption rate, and supporting all existing interlace and progressive formats, which includes 1080/24P.



Lens and viewfinder are optional.

### Features

●4:4:4 digital RGB HD signal output ●Single fiber connection ●Extended dynamic range ●Special gamma feature using a GUI based gamma editor ●Long exposure function to achieve more flexible and creative shooting ●2/3-inch type, 2.2-million-pixel FIT CCD ●12-bit A/D converter ●Supports all existing interlace and progressive formats including 1080/24P.

### Optional Accessories

HDVF-C30W Multi-format HD Color LCD  
Viewfinder  
BKP-L551 Li-ion Battery Adaptor  
HDVF-C750W Multi-format HD Color LCD  
Viewfinder  
HDVF-20A 2-inch Type HD B/W CRT  
Viewfinder  
HDCU-F950 Camera Control Unit  
RM-B750 Remote Control Unit  
HKC-T950 Sony HD CCD Block Adapter  
CAC-12 Camera Microphone Holder

### Specifications

#### General

Mass:  
5.1 kg (11 lb. 11 oz, without VF and lens)  
Dimensions (W x H x D):  
133 x 276 x 360 mm  
Operating temperature:  
-20 °C to +45°C (-4 °F to +113°F)  
Storage temperature:  
-20 °C to +50°C (-4 °F to +122°F)  
Lens mount:  
Sony bayonet mount

#### Imaging system

Pickup device:  
3-CCD 2/3-inch type 16:9 FIT  
Picture elements:  
2.2 million pixels  
Spectrum system:  
F1.4 prism system

### Input/Outputs

Input connector  
Front Mic in: XLR-3-31 type (Female x1) A  
Audio in: XLR-3-31 type (Female x 2)  
phantom +48 V, 600  $\Omega$ , balanced  
Return control: 6-pin DC in: XLR 4-pin type (Male x 1)  
DC in: XLR 4-pin type (Male x 1)  
Output connector  
Test out: BNC type, 1.0 Vp-p, 75  $\Omega$   
HD SDI out: BNC type  
DC out : 4-pin, 10.5 to 17 V, Max. 200 mA  
Earphone: Mini Jack, 8  $\Omega$   
Input/output connectors  
CCU: Optical fiber connector  
Lens: 12-pin  
Viewfinder connector: 20-pin  
Remote: 8-pin (for RCP-700 Series)  
External I/O: 20-pin (for CA-905L)  
Memory Stick slot (x 1)  
Dual Link HD SDI out (4:4:4) (BNC x 2)  
Genlock in/Return in/Prompter out (Selectable): BNC type

### Filter system

Color correction filter-A:  
Cross  
Color correction filter-B:  
3200 K  
Color correction filter-C:  
4300 K  
Color correction filter-D:  
6300 K  
Color correction filter-E:  
8000 K  
Neutral density filter-1:  
Clear  
Neutral density filter-2:  
1/4 ND

Neutral density filter-3:

1/8 ND

Neutral density filter-4:

1/16 ND

Neutral density filter-5:

1/64 ND

Servo filter control:

Yes

### Performance

Sensitivity:  
f 10 at 2000 lux (3200K, 89.9% reflectance)  
Minimum illumination:  
10 lux (F 1.4, + 12 dB gain up)  
Signal to noise ratio:  
54 dB (typical)  
Horizontal resolution:  
1000 TV lines  
Registration:  
Within 0.02% (all zones, without lens)  
Shutter speed selection (1080/24P):  
1/32, 1/48, 1/96, 1/125, 1/250, 1/500, 1/1000 (s)  
Gain selection:  
-3, 0, +3, +6, +12 dB  
Extended Clear Scan (1080/24P):  
30.3 to 58.3 Hz  
Modulation depth:  
45% or more horizontally (800 TV lines at center, 27.5 MHz, with typical lens)  
Smear level:  
-135 dB  
Frequency response:  
Within  $\pm 0.5$  dB, 10 to 25 MHz  
Within  $\pm 1.0$  dB, 25 to 30 MHz

## HD Cameras

### HDC-X300 HD Multi-purpose Camera

The HDC-X300 is a compact multi-purpose HD camera ideal for an extensive range of HD image acquisition applications. It comes equipped with an HD-SDI interface, and is the preferred choice for HD-exclusive operations.

#### Features

- Superb picture quality with three 1/2-inch type 1.5-megapixel HD CCDs
- Low smear level of -120 dB
- High signal-to-noise ratio of 52 dB
- Progressive mode
- Compact and lightweight design - only 1.2 kg (2 lb 10 oz)
- Low-Light shooting with slow shutter mode and gain up function
- Flexible image control
- HD-SDI interface
- D-sub 15-pin interface
- Camera remote control capability
- Optical ND filter and electronic CC function
- HKC-SV1 servo filter unit (option)

#### Supplied Accessories

- Operation manual (1)
- AC adaptor (1)
- AC cable (1)
- Tally unit (1)
- Number plate (1)
- Lens mount cap (1)

#### Optional Accessories

- HKC-SV1 Filter Servo Unit
- VCT-U14 Tripod Adaptor
- RM-B750 Remote Control Unit
- RM-B150 Remote Control Unit
- RCP-750 Remote Control Panel (Joystick type)
- RCP-751 Remote Control Panel (Dial control type)
- MSU-900 Master Setup Unit
- MSU-950 Master Setup Unit



# HD Cameras

HD Cameras

## Specifications

### General

- Power requirements
  - DC 12 V
- Power consumption
  - 18 W (camera head only)
  - 23.5 W (with the VCL-719BXS, HKC-SV1 Filter Servo Unit, and the RM-B750 Remote Control Unit connected)
- Operating temperature
  - 10 to +45 °C (+14 to +113 °F)
- Storage temperature
  - 20 to +60 °C (-4 to +140 °F)
- Mass
  - Approx. 1.2 kg (2 lb 10 oz), (camera head only)
  - Approx. 1.7 kg (3 lb 11 oz), (including camera head, tally unit)

### Camera

- Pickup device
  - 3-chip 1/2-inch type 1.5-megapixel CCD
- Effective picture elements (H x V)
  - 1440 x 1080
- Optical system
  - F1.4 prism system
- Built-in filters
  - 1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND
- Lens mount
  - Sony 1/2-inch bayonet mount
- Signal system
  - 1080/59.94i, 1080/50i
- Scanning system
  - 59.94i/23.976PsF/29.97PsF selectable at 59.94i
  - 50i/25PsF selectable at 50i
- Sync system
  - Internal and External (3 state/VBS (BB))
- Sensitivity (2000 lx, 89.9% reflectance)
  - F10 (typical)
- Minimum illumination
  - 0.003 lx (F1.4, +48 dB gain, with slow shutter mode at 64 frame accumulation)
- Gain selection
  - 3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB
- Shutter speed
  - 1/60 (50i mode), 1/100, 1/250, 1/500, 1/1000, 1/2000 s
- Slow shutter
  - 2, 3, 4, 5, 6, 7, 8, 16, 32, 64 frame
- Clear scan
  - 50 to 200 Hz (50i mode), 60 to 200 Hz (59.94i mode)
- Smear level
  - 120 dB (typical)
- S/N ratio
  - 52 dB (typical)
- Registration
  - 0.02% or less (all zones, without lens)
- Geometric distortion
  - Below measurable level (without lens)
- Modulation depth at 21 MHz
  - 40% (typical) (with HD SDI output)

### Signal inputs

- Genlock video
  - BNC type (1), 3-level/2-level (VBS, VS)
- Trigger
  - BNC type (1), TTL level

### Signal outputs

- HD SDI
  - BNC type (1), 0.8 Vp-p  $\pm$ 10%, 75  $\Omega$

## Video

- HD D-sub 15-pin (1)
- Y/Pr/Pb: 1.0 Vp-p, 75  $\Omega$
- R/G/B: 1.0 Vp-p, 75  $\Omega$
- HD/VD: TTL level (3 Vp-p)
- Sync: 0.6 Vp-p, 75  $\Omega$

## Tally

- Mini-jack (1)

## Other inputs/outputs

- Remote
  - 8-pin (1)
- Lens
  - 14-pin (1)
- DC input
  - DC jack (1)

## HD Cameras

# HDC-X300K HD Multi-purpose Camera

The HDC-X300K is a compact multi-purpose HD camera ideal for an extensive range of HD image acquisition applications. It comes equipped with an HD-SDI interface, and is the preferred choice for HD-exclusive operations.

### Features

- Superb picture quality with three 1/2-inch type 1.5-megapixel HD CCDs
- Low smear level of -120 dB
- High signal-to-noise ratio of 52 dB
- Progressive mode
- Compact and lightweight design - only 1.2 kg (2 lb 10 oz)
- Low-Light shooting with slow shutter mode and gain up function
- Auto-focus function using the supplied focus servo lens
- Flexible image control
- HD-SDI interface
- D-sub 15-pin interface
- Camera remote control capability
- Optical ND filter and electronic CC function
- HKC-SV1 servo filter unit (option)

### Supplied Accessories

- Operation manual (1)
- AC adaptor (1)
- AC cable (1)
- Tally unit (1)
- Number plate (1)
- Lens mount cap (1)

### Optional Accessories

- HKC-SV1 Filter Servo Unit
- VCT-U14 Tripod Adaptor
- RM-B750 Remote Control Unit
- RM-B150 Remote Control Unit
- RCP-750 Remote Control Panel (Joystick type)
- RCP-751 Remote Control Panel (Dial control type)
- MSU-900 Master Setup Unit
- MSU-950 Master Setup Unit



HD Cameras

HD Cameras

Specifications

General

Power requirements  
DC 12 V

Power consumption  
18 W (camera head only)  
23.5 W (with the VCL-719BXS, HKC-SV1 Filter Servo Unit, and the RM-B750 Remote Control Unit connected)

Operating temperature  
-10 to +45 °C (+14 to +113 °F)

Storage temperature  
-20 to +60 °C (-4 to +140 °F)

Mass  
Approx. 1.2 kg (2 lb 10 oz), (camera head only)  
Approx. 1.7 kg (3 lb 11 oz), (including camera head, tally unit)

Camera

Pickup device  
3-chip 1/2-inch type 1.5-megapixel CCD

Effective picture elements (H x V)  
1440 x 1080

Optical system  
F1.4 prism system

Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Lens mount  
Sony 1/2-inch bayonet mount

Signal system  
1080/59.94i, 1080/50i

Scanning system  
59.94i/23.976PsF/29.97PsF selectable at 59.94i  
50i/25PsF selectable at 50i

Sync system  
Internal and External (3 state/VBS (BB))

Sensitivity (2000 lx, 89.9% reflectance)  
F10 (typical)

Minimum illumination  
0.003 lx (F1.4, +48 dB gain, with slow shutter mode at 64 frame accumulation)

Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB

Shutter speed  
1/60 (50i mode), 1/100, 1/250, 1/500, 1/1000, 1/2000 s

Slow shutter  
2, 3, 4, 5, 6, 7, 8, 16, 32, 64 frame

Clear scan  
50 to 200 Hz (50i mode), 60 to 200 Hz (59.94i mode)

Smear level  
-120 dB (typical)

S/N ratio  
52 dB (typical)

Registration  
0.02% or less (all zones, without lens)

Geometric distortion  
Below measurable level (without lens)

Modulation depth at 21 MHz  
40% (typical) (with HD SDI output)

Signal inputs

Genlock video  
BNC type (1), 3-level/2-level (VBS, VS)

Trigger  
BNC type (1), TTL level

Signal outputs

HD SDI  
BNC type (1), 0.8 Vp-p ±10%, 75 Ω

Video  
HD D-sub 15-pin (1)  
Y/Pr/Pb: 1.0 Vp-p, 75 Ω  
R/G/B: 1.0 Vp-p, 75 Ω  
HD/VD: TTL level (3 Vp-p)  
Sync: 0.6 Vp-p, 75 Ω

Tally  
Mini-jack (1)

Other inputs/outputs

Remote  
8-pin (1)

Lens  
14-pin (1)

DC input  
DC jack (1)

VCL-719BXS (supplied with the HDC-X300K)

Focal length  
6.7 to 127 mm

Zoom  
Manual or power selectable

Zoom ratio  
x19

Maximum aperture  
1:1.6, 1:2.1 (at telephoto end)

Aperture  
Manual or automatic selectable

Focusing range  
Infinity to 5 cm

Filter attachment threads  
82 mm dia. 0.75 mm pitch

Mounting  
Sony 1/2-inch bayonet mount

Mass  
1.34 kg (2 lb 13 oz) including lens food

## HD Cameras

### HDC-X310 HD Multi-purpose Camera

The HDC-X310 is a compact multi-purpose HD camera ideal for an extensive range of HD image acquisition applications. It comes equipped with a fiber optical interface and adds operational flexibility through the use of its associated HFU-X310 signal interface unit.

#### Features

- Superb picture quality with three 1/2-inch type 1.5-megapixel HD CCDs
- Low smear level of -120 dB
- High signal-to-noise ratio of 52 dB
- Progressive mode
- Compact and lightweight design - only 1.3 kg (2 lb 13 oz)
- Low-Light shooting with slow shutter mode and gain up function
- Flexible image control
- D-sub 15-pin interface
- Camera remote control capability
- Optical ND filter and electronic CC function
- HKC-SV1 servo filter unit (option)

#### Supplied Accessories

- Operation manual (1)
- AC adaptor (1)
- AC cable (1)
- Tally unit (1)
- Number plate (1)
- Lens mount cap (1)

#### Optional Accessories

- HFU-X310 HD Optical Fiber Interface Unit
- HFBK-HD1 HD SDI Output Board
- HFBK-SD1 SDI Output Board
- HFBK-TS1 iLINK (HDV) Output Board
- HFBK-XG1 XGA Output Board
- HKC-SV1 Filter Servo Unit
- VCT-U14 Tripod Adaptor
- RM-B750 Remote Control Unit
- RM-B150 Remote Control Unit
- RCP-750 Remote Control Panel (Joystick type)
- RCP-751 Remote Control Panel (Dial control type)
- MSU-900 Master Setup Unit
- MSU-950 Master Setup Unit



# HD Cameras

HD Cameras

## Specifications

### General

Power requirements  
DC 12 V

Power consumption  
19 W (camera head only)  
24.5 W (with the VCL-719BXS, HKC-SV1  
Filter Servo Unit, and the RM-B750 Remote  
Control Unit connected)

Operating temperature  
-10 to +45 °C (+14 to +113 °F)

Storage temperature  
-20 to +60 °C (-4 to +140 °F)

Mass  
Approx. 1.3 kg (2 lb 13 oz) (camera head  
only)  
Approx. 1.8 kg (3 lb 15 oz) (including  
camera head, tally unit)

### Camera

Pickup device  
3-chip 1/2-inch type 1.5-megapixel CCD

Effective picture elements (H x V)  
1440 x 1080

Optical system  
F1.4 prism system

Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Lens mount  
Sony 1/2-inch bayonet mount

Signal system  
1080/59.94i, 1080/50i

Scanning system  
59.94i/23.976PsF/29.97PsF selectable at  
59.94i  
50i/25PsF selectable at 50i

Sync system  
Internal and External (3 state/VBS (BB))

Sensitivity (2000 lx, 89.9% reflectance)  
F10 (typical)

Minimum illumination  
0.003 lx (F1.4, +48 dB gain, with slow  
shutter mode at 64 frame  
accumulation)

Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB

Shutter speed  
1/60 (50i mode), 1/100, 1/250, 1/500,  
1/1000, 1/2000 s

Slow shutter  
2, 3, 4, 5, 6, 7, 8, 16, 32, 64 frame

Clear scan  
50 to 200 Hz (50i mode), 60 to 200 Hz  
(59.94i mode)

Smear level  
-120 dB (typical)

S/N ratio  
52 dB (typical)

Registration  
0.02% or less (all zones, without lens)

Geometric distortion  
Below measurable level (without lens)

Modulation depth at 21 MHz  
40% (typical) (with HD SDI output)

### Signal inputs

Genlock video  
BNC type (1), 3-level/2-level (VBS, VS)

Trigger  
BNC type (1), TTL level

## Signal outputs

Video  
HD D-sub 15-pin (1)  
Y/Pr/Pb: 1.0 Vp-p, 75 Ω  
R/G/B: 1.0 Vp-p, 75 Ω  
HD/VD: TTL level (3 Vp-p)  
Sync: 0.6 Vp-p, 75 Ω

Tally  
Mini-jack (1)

Other inputs/outputs

OFC  
Single mode, LC optical, connectors (2)

Remote  
8-pin (1)

Lens  
14-pin (1)

DC input  
DC jack (1)

## HD Cameras

# HDC-X310K HD Multi-purpose Camera

The HDC-X310K is a compact multi-purpose HD camera ideal for an extensive range of HD image acquisition applications. It comes equipped with a fiber optical interface and adds operational flexibility through the use of its associated HFU-X310 signal interface unit.

### Features

- Superb picture quality with three 1/2-inch type 1.5-megapixel HD CCDs
- Low smear level of -120 dB
- High signal-to-noise ratio of 52 dB
- Progressive mode
- Compact and lightweight design - only 1.3 kg (2 lb 13 oz)
- Low-Light shooting with slow shutter mode and gain up function
- Auto-focus function using the supplied focus servo lens
- Flexible image control
- D-sub 15-pin interface
- Camera remote control capability
- Optical ND filter and electronic CC function
- HKC-SV1 servo filter unit (option)

### Supplied Accessories

Operation manual (1)  
AC adaptor (1)  
AC cable (1)  
Tally unit (1)  
Number plate (1)  
Lens mount cap (1)

### Optional Accessories

HFU-X310 HD Optical Fiber Interface Unit  
HFBK-HD1 HD SDI Output Board  
HFBK-SD1 SDI Output Board  
HFBK-TS1 iLINK (HDV) Output Board  
HFBK-XG1 XGA Output Board  
HKC-SV1 Filter Servo Unit  
VCT-U14 Tripod Adaptor  
RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
RCP-750 Remote Control Panel (Joystick type)  
RCP-751 Remote Control Panel (Dial control type)  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit



# HD Cameras

HD Cameras

## Specifications

### General

Power requirements  
DC 12 V

Power consumption  
19 W (camera head only)  
24.5 W (with the VCL-719BXS, HKC-SV1 Filter Servo Unit, and the RM-B750 Remote Control Unit connected)

Operating temperature  
-10 to +45 °C (+14 to +113 °F)

Storage temperature  
-20 to +60 °C (-4 to +140 °F)

Mass  
Approx. 1.3 kg (2 lb 13 oz) (camera head only)  
Approx. 1.8 kg (3 lb 15 oz) (including camera head, tally unit)

### Camera

Pickup device  
3-chip 1/2-inch type 1.5-megapixel CCD

Effective picture elements (H x V)  
1440 x 1080

Optical system  
F1.4 prism system

Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Lens mount  
Sony 1/2-inch bayonet mount

Signal system  
1080/59.94i, 1080/50i

Scanning system  
59.94i/23.976PsF/29.97PsF selectable at 59.94i  
50i/25PsF selectable at 50i

Sync system  
Internal and External (3 state/VBS (BB))

Sensitivity (2000 lx, 89.9% reflectance)  
F10 (typical)

Minimum illumination  
0.003 lx (F1.4, +48 dB gain, with slow shutter mode at 64 frame accumulation)

Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB

Shutter speed  
1/60 (50i mode), 1/100, 1/250, 1/500, 1/1000, 1/2000 s

Slow shutter  
2, 3, 4, 5, 6, 7, 8, 16, 32, 64 frame

Clear scan  
50 to 200 Hz (50i mode), 60 to 200 Hz (59.94i mode)

Smear level  
-120 dB (typical)

S/N ratio  
52 dB (typical)

Registration  
0.02% or less (all zones, without lens)

Geometric distortion  
Below measurable level (without lens)

Modulation depth at 21 MHz  
40% (typical) (with HD SDI output)

### Signal inputs

Genlock video  
BNC type (1), 3-level/2-level (VBS, VS)

Trigger  
BNC type (1), TTL level

### Signal outputs

Video  
HD D-sub 15-pin (1)  
Y/Pr/Pb: 1.0 Vp-p, 75 Ω  
R/G/B: 1.0 Vp-p, 75 Ω  
HD/VD: TTL level (3 Vp-p)  
Sync: 0.6 Vp-p, 75 Ω

Tally  
Mini-jack (1)

Other inputs/outputs

OFC  
Single mode, LC optical, connectors (2)

Remote  
8-pin (1)

Lens  
14-pin (1)

DC input  
DC jack (1)

VCL-719BXS

Focal length  
6.7 to 127 mm

Zoom  
Manual or power selectable

Zoom ratio  
x19

Maximum aperture  
1:1.6, 1:2.1 (at telephoto end)

Aperture  
Manual or automatic selectable

Focusing range  
Infinity to 5 cm

Filter attachment threads  
82 mm dia. 0.75 mm pitch

Mounting  
Sony 1/2-inch bayonet mount

Mass  
1.34 kg (2 lb 13 oz) including lens food

Studio/OB Cameras

BVP-900 ..... 18  
BVP-900P ..... 20  
BVP-950 ..... 22  
BVP-950P ..... 23  
BVP-9500WS ..... 24  
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Studio/OB Cameras

## Studio/OB Cameras

### BVP-900 3-chip CCD Studio/OB Camera System

#### Features

- A true flagship of Sony's studio/OB camera for high-end broadcast applications
- Industry-first Integrated Imaging Capsule technology (refer to OHB-750A/750WSA/730/730WS)
- Advanced digital signal processing and 12-bit A/D conversion
- Highest possible picture quality of Power HAD 1000 CCD imager
- 16:9/4:3 switchable when used with OHB-750WSA/730WS (and their respective PAL versions)
- Very high depth of modulation of 80% at 5 MHz
- Excellent signal-to-noise ratio of 65 dB
- High sensitivity of F8.0 at 2000 lx
- High horizontal resolution of 900 TV lines when used with OHB-750A/730
- Five positions of ND-CC filters
- Electronic shutter function
- Electronic clear scan
- Knee saturation control function
- Adaptive highlight control function
- Electronic soft focus
- Fine detail control function
- Triple skintone detail control function
- 3D white shading
- Skintone auto iris
- Multi matrix
- Black Gamma control function
- Fully compatible with Sony's New Generation Camera Control Units
- Wideband component triax transmission system
- Advanced filing system with MSU-700A/750
- Optical Head Block can store its OHB data within itself
- Low profile body design
- Viewfinder lock system
- VF menu display
- Full plug-in CCD block
- Rotary type triax connector
- Various input/output connectors and optional accessories

\*BVP-900 is not supplied with a CCD block. At least one unit of CCD Imaging Capsule (OHB series) should be ordered with a camera.

#### Supplied Accessories

Angle adjustment fittings (2)  
 Front cover (1)  
 Number plate for up tally (1)  
 Number plate for side panel (2)  
 Number plate for rear panel (1)  
 Belt for cable clamp (2)  
 Maintenance manual (1)  
 16:9/4:3 conversion board (supplied with OHB-750WSA/730WS) (1)  
 Operation manual (1)

#### Optional Accessories

RM-B750 Remote Control Unit  
 BVF-77 7-inch Type B/W Viewfinder (EIA)  
 BVF-7700 7-inch Type Color Viewfinder  
 VFH-770 7-inch Type Viewfinder Sports Hood  
 BKP-7910 Standalone Unit  
 CCU-700A Camera Control Unit  
 BKP-7911 Script Holder  
 BKP-7912 Script Holder  
 OHB-750A Integrated Imaging Capsule  
 OHB-750WSA Integrated Imaging Capsule  
 OHB-730 Integrated Imaging Capsule  
 OHB-730WS Integrated Imaging Capsule  
 BKP-9901 Camera System Manual



Studio/OB Cameras

Specifications

Pickup device system:  
3-chip 2/3-inch type FIT CCD\*

Picture elements:  
1038(H) x 504(V)

Filter wheels  
Color filter-A:  
Cross  
Color filter-B:  
3200K  
Color filter-C:  
4300K  
Color filter-D:  
6300K  
Color filter-E:  
8000K  
ND filter-1:  
Clear  
ND filter-2:  
1/4ND  
ND filter-3:  
1/8ND  
ND filter-4:  
1/16ND  
ND filter-5:  
1/64ND

Sensitivity:  
F 8.0 at 2000 lx (with OHB-750A)  
(3200K 89.9% reflective)

Minimum illumination:  
7.8 lx (F1.4, +18 dB gain up)

S/N ratio:  
65 dB

Horizontal resolution:  
900 TV Line

Vertical resolution:  
450 TV line  
(with EVS or Super EVS)

Smear level:  
-145 dB (with OHB-750A)

Shutter speed selection:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000  
s

Gain selection:  
-3 db, 0 dB, +3 dB, +6 dB, +9 db, +12 dB,  
+18 dB

Clear scan selection:  
30.4 to 7000 Hz

Input connectors  
Mic input:  
XLR-3-pin (Female) x 2, phantom +48 V  
Reference input:  
BNC type (BKP-7910 required)  
DC input:  
XLR-4-pin (male) (BKP-7910 required)

RET control:  
6-pin

Output connectors  
Test output:  
BNC type, 1.0 Vp-p, 75 Ω  
Prompter:  
BNC type, 1.0 Vp-p, 75 Ω  
AC utility output:  
MAX. 200 VA  
Video output:  
BNC type, 1.0 Vp-p, 75 Ω (BKP-7910  
required)  
Script:  
4-pin, 5 W/12 VDC  
Intercom:  
XLR-5-pin x 2

Input/output connectors  
CCU:  
Kings type

Lens:  
36-pin  
VTR:  
26-pin  
Tracker:  
10-pin  
Remote:  
8-pin multi-connector  
Operating temperature:  
-20 to + 45 °C (-4 to +113 °F)  
Storage temperature:  
-20 to + 50 °C (-4 to +122 °F)  
Mass:  
20 kg (44 lb 1 oz)

\*IT CCD/widescreen CCDs are also available

Studio/OB Cameras

## Studio/OB Cameras

# BVP-900P 3-chip CCD Studio/OB Camera System

### Features

- A true flagship of Sony's studio/OB camera for high-end broadcast applications
- Industry-first Integrated Imaging Capsule technology (refer to OHB-750AP/750WSAP/730P/730WSP)
- Advanced digital signal processing and 12-bit A/D conversion
- Highest possible picture quality of Power HAD 1000 CCD imager
- 16:9/4:3 switchable when used with OHB-750WSAP/730WSP
- Very high depth of modulation of 80% at 5 MHz
- Excellent signal-to-noise ratio of 63 dB
- High sensitivity of F8.0 at 2000 lx
- High horizontal resolution of 900 TV lines when used with OHB-750AP/730P
- Five positions of ND-CC filters
- Electronic shutter function
- Electronic clear scan
- Knee saturation control function
- Adaptive highlight control function
- Electronic soft focus
- Fine detail control function
- Triple skintone detail control function
- 3D white shading
- Skintone auto iris
- Multi matrix
- Black Gamma control function
- Fully compatible with Sony's New Generation Camera Control Units
- Wideband component triax transmission system
- Advanced filing system with MSU-700A/750
- Optical Head Block can store its OHB data within itself
- Low profile body design
- Viewfinder lock system
- VF menu display
- Full plug-in CCD block
- Rotary type triax connector
- Various input/output connectors and optional accessories

\*BVP-900P is not supplied with a CCD block. At least one unit of CCD Imaging Capsule (OHB series) should be ordered with a camera.

### Supplied Accessories

- Angle adjustment fittings (2)
- Front cover (1)
- Number plate for up tally (1)
- Number plate for side panel (2)
- Number plate for rear panel (1)
- Belt for cable clamp (2)
- Operation manual (1)
- Maintenance manual (1)
- 16:9/4:3 conversion board (supplied with OHB-750WSAP/730WSP) (1)

### Optional Accessories

- BVF-77CE 7-inch Type B/W Viewfinder (CCIR)
- BVF-7700P 7-inch Type Color Viewfinder
- VFH-770 7-inch Type Viewfinder Sports Hood
- BKP-7910P Standalone Unit
- CCU-700AP Camera Control Unit
- BKP-7911 Script Holder
- BKP-7912 Script Holder
- OHB-750AP Integrated Imaging Capsule
- OHB-750WSAP Integrated Imaging Capsule
- OHB-730P Integrated Imaging Capsule
- OHB-730WSP Integrated Imaging Capsule
- BKP-9901 Camera System Manual



Studio/OB Cameras

Specifications

Pickup device system:  
3-chip 2/3-inch type FIT CCD\*

Picture elements:  
1038(H) × 594(V)

Filter wheels  
Color filter-A:  
Cross  
Color filter-B:  
3200K  
Color filter-C:  
4300K  
Color filter-D:  
6300K  
Color filter-E:  
8000K  
ND filter-1:  
Clear  
ND filter-2:  
1/4ND  
ND filter-3:  
1/8ND  
ND filter-4:  
1/16ND  
ND filter-5:  
1/64ND

Sensitivity:  
F 8.0 at 2000 lx (with 750AP)  
(3200K 89.9% reflective)

Minimum illumination:  
7.8 lx (F1.4, +18 dB gain up)

S/N ratio:  
63 dB

Horizontal resolution:  
900 TV lines

Vertical resolution:  
530 TV lines  
(with EVS or Super EVS)

Smear level:  
-145 dB (with OHB-750AP)

Shutter speed selection:  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s

Gain selection:  
-3 db, 0 dB, +3 dB, +6 dB, +9 db, +12 dB,  
+18 dB

Clear scan selection:  
25.4 to 9000 Hz

Input connectors  
Mic input:  
XLR-3-pin (female) x 2, phantom +48 V  
Reference input:  
BNC type (BKP-7910P required)  
DC input:  
XLR-4-pin (male) (BKP-7910P required)

RET control:  
6-pin

Output connectors  
Test out:  
BNC type, 1.0Vp-p, 75 Ω  
Prompter:  
BNC type, 1.0Vp-p, 75 Ω  
AC utility output:  
MAX. 200 VA  
Video output:  
BNC type, 1.0 Vp-p, 75 Ω (BKP-7910P  
required)  
Script:  
4-pin, 5 W/12 VDC  
Intercom:  
XLR-5-pin × 2

Input/output connectors  
CCU:  
Fischer type

Lens:  
36-pin  
VTR:  
26-pin  
Tracker:  
10-pin  
Remote:  
8-pin multi-connector  
Operating temperature:  
-20 to + 45 °C (-4 to +113 °F)  
Storage temperature:  
-20 to + 50 °C (-4 to +122 °F)  
Mass:  
20 kg (44 lb 1 oz)

\*IT CCD/widescreen CCDs are also available

Studio/OB Cameras

## Studio/OB Cameras

### BVP-950 3-chip CCD Studio/OB Camera

#### Features

•The BVP-900's full companion studio/OB portable camera with the same CCD Imaging Capsule •Advanced digital signal processing and 12-bit A/D conversion  
 •Highest possible picture quality of Power HAD 1000 CCD imager •High horizontal resolution of 900 TV lines when used with OHB-750A/730 •Excellent signal-to-noise ratio of 65 dB •Very high depth of modulation of 80% at 5 MHz •Electronic shutter function •High sensitivity of F8.0 at 2000 lx •Electronic clear scan •Five positions of ND-CC filters •Two channels of intercom with CA-570  
 •Knee saturation control function •Adaptive highlight control function •Electronic soft focus •Triple skintone detail control function •Fine detail control function •3D white shading •Skintone auto iris •Multi matrix •Black Gamma control function •Fully compatible with Sony's New Generation Camera Control Units •Wideband component triax transmission system •Advanced filing system with MSU-700A/750 •Optical Head Block can store its OHB data within itself •Switch cover on the side panel prevents miss operation •Return 1 and 2 switch/Intercom switch on the carrying handle  
 •Servo-controlled ND and CC filters •One button operation to dock or release a camera adaptor •Various camera adapters are available

\*BVP-950 is not supplied with a CCD block. At least one should be ordered with a camera. \*Lens with 'shrinker' function are recommended for WS models.

#### Supplied Accessories

Operation manual (1)  
 Maintenance manual (1)  
 16:9/4:3 conversion board (supplied with OHB-750WSA/730WS) (1)

#### Optional Accessories

RM-B750 Remote Control Unit  
 BVF-20W 2-inch Type 16:9 B/W Viewfinder  
 BVF-C10W 1.35-inch Type Color Viewfinder  
 BVF-10 1.5-inch Type B/W CRT Viewfinder (EIA)  
 BVF-55 5-inch Type B/W Viewfinder (EIA)  
 VFH-550 5-inch Type Viewfinder Sports Hood  
 OHB-750A Integrated Imaging Capsule  
 OHB-750WSA Integrated Imaging Capsule  
 OHB-730 Integrated Imaging Capsule  
 OHB-730WS Integrated Imaging Capsule  
 CA-570 Camera Adaptor  
 CA-550 Camera Adaptor  
 CA-530 Camera Adaptor  
 CA-553 Camcorder Adaptor  
 CA-905K Large Lens Adaptor (Kings Type)  
 CA-950 Camera Adaptor  
 VCT-14 Tripod Adaptor  
 BKP-9901 Camera System Manual  
 CCU-700A Camera Control Unit

#### Specifications

Pickup device system:  
 3-chip 2/3-inch type FIT CCD\*  
 Picture elements:  
 1038(H) × 504(V)  
 Filter wheels  
 Color filter-A:  
 Cross

Color filter-B:  
 3200K  
 Color filter-C:  
 4300K  
 Color filter-D:  
 6300K  
 Color filter-E:  
 8000K  
 ND filter-1:  
 Clear  
 ND filter-2:  
 1/4ND  
 ND filter-3:  
 1/8ND  
 ND filter-4:  
 1/16ND  
 ND filter-5:  
 1/64ND  
 Sensitivity:  
 F 8.0 at 2000 lx (with OHB-750A)  
 (3200K 89.9% reflective)  
 Minimum illumination:  
 7.8 lx (F1.4, +18 dB gain up)  
 S/N ratio:  
 65 dB  
 Horizontal resolution:  
 900 TV lines  
 Vertical resolution:  
 450 TV lines  
 (with EVS or Super EVS)  
 Smear level:  
 -145 dB (with OHB-750A)  
 Shutter speed selection:  
 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000  
 s



Lens, CA and viewfinder are optional.

#### Gain selection:

-3 db, 0 dB, +3 dB, +6 dB, +9 dB, +12 dB, +18 dB

#### Clear scan selection:

30.4 to 7000 Hz

#### Input connectors

##### Mic input:

XLR-3-pin (female), phantom +48 V

#### Output connectors

##### Test output:

BNC type, 1.0 Vp-p, 75 Ω

#### Input/output connectors

##### Lens:

12-pin

##### Remote:

8-pin multi-connector

#### Operating temperature:

-20 to +45 °C (-4 to +113 °F)

#### Storage temperature

-20 to +50 °C (-4 to +122 °F)

#### Mass

3.7 kg (8 lb 2 oz) (with OHB-750A and BVF-10)

\*IT CCD/widescreen CCDs are also available

## Studio/OB Cameras

# BVP-950P 3-chip CCD Studio/OB Camera

### Features

●BVP-900P's full companion studio/OB portable camera with the same CCD Imaging Capsule ●Advanced digital signal processing and 12-bit A/D conversion ●Highest possible picture quality of Power HAD 1000 CCD imager ●High horizontal resolution of 900 TV lines when used with OHB-750AP/730P ●Excellent signal-to-noise ratio of 63 dB ●Very high depth of modulation of 80% at 5 MHz ●Electronic shutter function ●High sensitivity of F8.0 at 2000 lx ●Electronic clear scan ●Five positions of ND-CC filters ●Two channels of intercom with CA-570P ●Knee saturation control function ●Adaptive highlight control function ●Electronic soft focus ●Triple skintone detail control function ●Fine detail control function ●3D white shading ●Skintone auto iris ●Multi matrix ●Black Gamma control function ●Fully compatible with Sony's New Generation Camera Control Units ●Wideband component triax transmission system ●Advanced filing system with MSU-700A/750 ●Optical Head Block can store its OHB data within itself ●Switch cover on the side panel prevents miss operation ●Return 1 and 2 switch/Intercom switch on the carrying handle ●Servo-controlled ND and CC filters ●One button operation to dock or release a camera adapter ●Various camera adapters are available

\*BVP-950P is not supplied with a CCD block. At least one should be ordered with a camera. \*Lens with 'shrinker' function are recommended for WS models.



Lens, CA and viewfinder are optional.

Studio/OB Cameras

### Supplied Accessories

Operation manual (1)  
 Maintenance manual (1)  
 16:9/4:3 conversion board (supplied with OHB-750WSAP/730WSP) (1)

### Optional Accessories

RM-B750 Remote Control Unit  
 BVF-20WCE 2-inch Type 16:9 B/W Viewfinder  
 BVF-C10W 1.35-inch Type Color Viewfinder  
 BVF-10CE 1.5-inch Type B/W CRT Viewfinder (CCIR)  
 BVF-55CE 5-inch Type B/W Viewfinder (CCIR)  
 VFH-550 5-inch Type Viewfinder Sports Hood  
 OHB-750AP Integrated Imaging Capsule  
 OHB-750WSAP Integrated Imaging Capsule  
 OHB-730P Integrated Imaging Capsule  
 OHB-730WSP Integrated Imaging Capsule  
 CA-570P Camera Adaptor  
 CA-550P Camera Adaptor  
 CA-530 Camera Adaptor  
 CA-553 Camcorder Adaptor  
 CA-905F Large Lens Adaptor (Fischer Type)  
 CA-950P Camera Adaptor  
 VCT-14 Tripod Adaptor  
 CCU-700AP Camera Control Unit  
 BKP-9901 Camera System Manual

### Specifications

Pickup device system:

3-chip 2/3-inch type FIT CCD\*

Picture elements:

1038(H) × 594(V)

Filter wheels

Color filter-A:

Cross

Color filter-B:

3200K

Color filter-C:

4300K

Color filter-D:

6300K

Color filter-E:

8000K

ND filter-1:

Clear

ND filter-2:

1/4ND

ND filter-3:

1/8ND

ND filter-4:

1/16ND

ND filter-5:

1/64ND

Sensitivity:

F 8.0 at 2000 lx (with OHB-750AP)  
(3200K 89.9% reflective)

Minimum illumination:

7.8 lx (F1.4, +18 dB gain up)

S/N ratio:

63 dB

Horizontal resolution:

900 TV lines

Vertical resolution:

530 TV lines

(with EVS or Super EVS)

Smear level:

-145 dB (with OHB-750AP)

Shutter speed selection:

1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s

Gain selection:

-3 dB, 0 dB, +3 dB, +6 dB, +9 dB, +12 dB,  
+18 dB

Clear scan selection:

25.4 to 9000 Hz

Input connectors

Mic input:

XLR-3-pin (female), phantom +48 V

Output connectors

Test output:

BNC type, 1.0 Vp-p, 75 Ω

Input/output connectors

Lens:

12-pin

Remote:

8-pin multi-connector

Operating temperature:

-20 to +45 °C (-4 to +113 °F)

Storage temperature:

-20 to +50 °C (-4 to +122 °F)

Mass:

3.7 kg (8 lb 2 oz) (with OHB-750AP and BVF-10)

\*IT CCD/widescreen CCDs are also available

## Studio/OB Cameras

# BVP-9500WS Super Motion Video Camera

Studio/OB Cameras

\*Switchable capturing system: Super Motion (slow motion recording) and standard modes \*Captures at three times normal frame rate in the 525/180 Super Motion mode \*Power HAD 1000 CCD imager \*Advanced digital signal processing (ADSP) and 12-bit A/D converter \*Excellent signal-to-noise ratio of 60 dB (in Super Motion mode, typical)/64 dB (in standard mode, typical) \*Electronic shutter function \*Sensitivity of F4.0 at 2000 lx with a minimum illumination of 60 lx (in Super Motion mode) \*Fiber optic transmission system (via CA-950) \*Dual optical filters: ND/CC filter wheels, five positions each \*Automatic setup and filing function \*Compact and lightweight design \*Both standard and Super Motion camera adaptors can be connected



Lens, CA and viewfinder are optional.

### Supplied Accessories

Operation manual (1)  
Maintenance manual (1)  
Filter table (2)  
+B3x6 screw (2)  
+B4x8 screw (2)

### Dynamic range

525/60 mode:  
600%  
525/180 mode:  
400%

Smear level:  
-120 dB

### Optional Accessories

BKP-9057 Viewfinder Saddle  
BVF-7700 7-inch Type Color Viewfinder  
BVF-77 7-inch Type B/W Viewfinder (EIA)  
VFH-770 7-inch Type Viewfinder Sports Hood  
VFH-550 5-inch Type Viewfinder Sports Hood  
CA-905L Large Lens Adaptor (Lemo Type)  
CA-950 Camera Adaptor  
CA-570 Camera Adaptor  
CA-550 Camera Adaptor  
CA-553 Camcorder Adaptor  
LCR-1 Camera Rain Cover  
CCU-900 Camera Control Unit

### Geometric distortion:

Below measurable level (w/o lens)

### Shutter speed selection

525/60 mode:  
1/60, 1/125, 1/250, 1/500, 1/1000,  
1/2000 s

### 525/180 mode:

1/180, 1/375, 1/750, 1/1500, 1/3000,  
1/6000 s

### Gain selection:

-3 dB, 0 dB, +3 dB, +6 dB, +9 dB, +12 dB

### Power consumption

525/60 mode:

24 W

525/180 mode:

39 W

### Operating temperature:

-20 to 45°C (-4 to 113°F)

### Storage temperature:

-20 to 60°C (-4 to 140°F)

### Input connectors

MIC:

XLR 3-pin (female), Phantom POWER

### Output connectors

Test out:

BNC type, 1.0 Vp-p, 75  $\Omega$

### Input/output connectors

Viewfinder I/F:

20-pin

Lens I/F:

12-pin

Camera adaptor I/F:

68-pin, Remote: 8-pin (for RCP-700 series and RM-B150)

### Mass (without lens):

3.5 kg (7 lb 11 oz)

### Dimensions:

148 (W) x 270 (H) x 302 (D) mm  
(5 7/8 x 10 3/4 x 12 inches)

### Specifications

#### Pickup device:

3-chip 2/3-inch type 16:9/4:3 switchable

Power HAD 1000 IT CCD

#### Picture elements:

1038 (H) x 504 (V)

#### Spectrum system:

F1.4 prism system

#### Filter wheels

CC:

A: Cross, B: 3200K, C: 4300K, D:  
6300K, E: 8000K

ND:

1: Clear, 2: 1/4ND, 3: 1/8ND, 4: 1/16ND,  
5: 1/64ND

#### Servo filter unit:

Available

#### Sensitivity (typical)

525/60 mode:

F8.0 at 2000 lx (89.9% reflectance)

525/180 mode:

F4.0 at 2000 lx (89.9% reflectance)

#### Minimum illumination

525/60 mode:

16 lx (F1.4, +12 dB gain up)

525/180 mode:

60 lx (F1.4, +12 dB gain up)

#### S/N (typical)

525/60 mode:

64 dB

525/180 mode:

60 dB

## Studio/OB Cameras

# BVP-9500WSP Super Motion Video Camera

\*Switchable capturing system: Super Motion (slow motion recording) and standard modes \*Captures at three times normal frame rate in the 625/150 Super Motion mode  
 \*Power HAD 1000 CCD imager \*Advanced digital signal processing (ADSP) and 12-bit A/D converter \*Excellent signal-to-noise ratio of 58 dB (in Super Motion mode, typical)/62 dB (in standard mode, typical) \*Electronic shutter function \*Sensitivity of F4.0 at 2000 lx with a minimum illumination of 60 lx (in Super Motion mode)  
 \*Fiber optic transmission system (via CA-950P) \*Dual optical filters: ND/CC filter wheels, five positions each  
 \*Automatic setup and filing function \*Compact and lightweight design \*Both standard and Super Motion camera adaptors can be connected



Lens, CA and viewfinder are optional.

### Supplied Accessories

Operation manual (1)  
 Maintenance manual (1)  
 Filter label (2)  
 +B3x6 screw (2)  
 +B4x8 screw (2)

### Dynamic range

625/60 mode:  
 600%  
 625/150 mode:  
 400%

Smear level:  
 -120 dB

### Optional Accessories

BKP-9057 Viewfinder Saddle  
 BVF-7700P 7-inch Type Color Viewfinder  
 BVF-77CE 7-inch Type B/W Viewfinder (CCIR)  
 VFH-550 5-inch Type Viewfinder Sports Hood  
 VFH-770 7-inch Type Viewfinder Sports Hood  
 CA-905L Large Lens Adaptor (Lemo Type)  
 CA-950P Camera Adaptor  
 CA-570P Camera Adaptor  
 CA-550P Camera Adaptor  
 CA-553 Camcorder Adaptor  
 CCU-900P Camera Control Unit  
 LCR-1 Camera Rain Cover

### Geometric distortion:

Below measurable level (w/o lens)

### Shutter speed selection

625/60 mode:  
 1/60, 1/125, 1/250, 1/500, 1/1000,  
 1/2000 s

### 625/150 mode:

1/180, 1/375, 1/750, 1/1500, 1/3000,  
 1/6000 s

### Gain selection:

-3 dB, 0 dB, +3 dB, +6 dB, +9 dB, +12 dB

### Power consumption

625/60 mode:

24 W

625/150 mode:

39 W

### Operating temperature:

-20 to 45°C (-4 to 113°F)

### Storage temperature:

-20 to 60°C (-4 to 140°F)

### Input connectors

MIC:

XLR 3-pin (female), Phantom POWER

### Output connectors

Test out:

BNC type, 1.0 Vp-p, 75  $\Omega$

### Input/output connectors

Viewfinder I/F:

20-pin

Lens I/F:

12-pin

Camera adaptor I/F:

68-pin, Remote: 8-pin (for RCP-700 series and RM-B150)

### Mass (without lens):

3.5 kg (7 lb 11 oz)

### Dimensions:

148 (W) x 270 (H) x 302 (D) mm  
 (5 7/8 x 10 3/4 x 12 inches)

### Specifications

#### Pickup device:

3-chip 2/3-inch type 16:9/4:3 switchable

Power HAD 1000 IT CCD

#### Picture elements:

1038 (H) x 594 (V)

#### Spectrum system:

F1.4 prism system

#### Filter wheels

CC:

A: Cross, B: 3200K, C: 4300K, D:  
 6300K, E: 8000K

ND:

1: Clear, 2: 1/4ND, 3: 1/8ND, 4: 1/16ND,  
 5: 1/64ND

#### Servo filter unit:

Available

#### Sensitivity (typical)

625/60 mode:

F8.0 at 2000 lx (89.9% reflectance)

625/150 mode:

F4.0 at 2000 lx (89.9% reflectance)

#### Minimum illumination

625/60 mode:

16 lx (F1.4, +12 dB gain up)

625/150 mode:

60 lx (F1.4, +12 dB gain up)

#### S/N (typical)

625/60 mode:

62 dB

625/150 mode:

58 dB

## Studio/OB Cameras

Studio/OB Cameras

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Production Cameras

## Production Cameras

# BVP-E30 3-chip CCD Portable Color Camera

### Features

- Portable studio/OB/EPF camera ●Three-chip Power HAD EX CCD imager for superb picture quality
- Advanced digital signal processing and 14-bit A/D conversion ●Switchable progressive(\*) and interlace modes ●Excellent signal-to-noise ratio of 67 dB and remarkably low smear level of -145 dB (typical) ●High sensitivity of F11 at 2000 lx ●Digital 3-D white shading
- Cross color suppression function ●Low key saturation function ●Adaptive highlight control (Auto knee mode)
- Knee saturation control ●Multi-matrix function
- Enhanced vertical detail (Non-additive mix) ●Adaptive detail control ●Triple skin tone detail control ●Electronic soft focus ●Full compatibility with current Sony Camera Control Units for seamless integration into Sony BVP-900 Series, BVP-700 Series and BVP-500 Series camera systems using existing Sony MSUs, CNUs and RCPs
- Compatible with Sony Wireless Camera System WLL-CA55 and WLL-RX55 ●Wideband component triax transmission system ●Fiber optic transmission system
- CC filter- electronic and optical ●Auto tracing white balance ●Assignable switches ●Memory Stick system for storage/recall of parameters ●Menu knob ●Adjustable shoulder pad

(\*)29.97 PsF



Lens, CA and viewfinder are optional.

### Supplied Accessories

Operational manual (1)  
CD-ROM Operation manual (1)  
Label for assignable switch (1)

### Optional Accessories

CA-590 Camera Adaptor  
CA-570 Camera Adaptor  
CA-950 Camera Adaptor  
WLL-CA55 Wireless Camera Transmitter (UC)  
CA-905K Large Lens Adaptor (Kings Type)  
CCU-590 Portable Camera Control Unit  
CCU-790 Camera Control Unit  
CCU-550A Portable Camera Control Unit  
CCU-700A Camera Control Unit  
CCU-900 Camera Control Unit  
WLL-RX55 Wireless Camera Receiver  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit  
RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
MSU-700A Master Setup Unit  
MSU-750 Master Setup Unit  
RCP-750 Remote Control Panel (Joystick type)  
RCP-751 Remote Control Panel (Dial control type)  
RCP-700 Remote Control Panel (Joystick Type)  
RCP-701 Remote Control Panel (Dial Control Type)  
CNU-700 Camera Command Network Unit  
CNU-500 Camera Command Network Unit  
VCS-700 Video Selector  
MSA-A "Memory Stick" IC Memory Media  
MSH "Memory Stick" IC Memory Media  
VCT-14 Tripod Adaptor

BVF-55 5-inch Type B/W Viewfinder (EIA)  
BVF-10 1.5-inch Type B/W CRT Viewfinder (EIA)

### Specifications

#### General

Power consumption:  
13 W  
Operating temperature:  
-20 °C to + 45 °C (-4 °F to +113 °F)  
Storage temperature:  
-20 °C to + 60 °C (-4 °F to +140 °F)  
Dimensions (W x H x D):  
125 x 285 x 291 mm (5 x 11 1/4 x 11 1/2 inches)  
Mass:  
Approx. 2.5 kg (5 lb 8 oz) (not including viewfinder)

#### Camera

A/D conversion:  
14 bits  
Optical system:  
F 1.4 prism  
Image device:  
3-chip 2/3-inch type Power HAD CCD  
Total picture elements (H x V):  
1038 x 1008  
Smear level (typical):  
-145 dB  
Scan format:  
59.94i, 29.97PsF  
Built in filters:  
1: CLEAR, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
A: CROSS, B: 3200K, C: 4300K, D: 6300K  
Horizontal resolution (center):  
900 TV Lines  
Modulation depth (center):  
80%

Vertical resolution:  
400 TV lines/450 TV lines (with EVS)  
S/N ratio (typical):  
67 dB  
Sensitivity (typical):  
F 11 at 2000 lx  
(3200K 89.9% reflectance)  
Gain selection:  
-3, 0, +3, +6, +9, +12, +18, +24, +30, +36, +42 dB  
Set-up memory card:  
Memory Stick  
Shutter speed:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s  
Clear scan:  
1/30(\*) to 1/6000 s

#### Interface

Input connector:  
Microphone: XLR 3-pin, -60 dBu  
Output connector:  
Test out: BNC type, 1.0 Vp-p, 75 Ω, unbalanced  
Others:  
Lens: 12-pin  
Viewfinder: 20-pin  
Digital interface: 68-pin  
Analog interface: 68-pin  
Lens mount: Special bayonet mount (B4)

#### Eco-info

Lead-free solder is used for soldering.  
Halogenated flame retardants are not used in the cabinets and the printed wiring boards.

(\*)1/30-1/60 are on PsF mode.

## Production Cameras

# BVP-E30P 3-chip CCD Portable Color Camera

### Features

- Portable studio/OB/EPF camera ●Three-chip Power HAD EX CCD imager for superb picture quality
- Advanced digital signal processing and 14-bit A/D conversion ●Switchable progressive(\*) and interlace modes ●Excellent signal-to-noise ratio of 65 dB and remarkably low smear level of -145 dB (typical) ●High sensitivity of F11 at 2000 lx ●Digital 3-D white shading
- Cross color suppression function ●Low key saturation function ●Adaptive highlight control (Auto knee mode)
- Knee saturation control ●Multi-matrix function
- Enhanced vertical detail (Non-additive mix) ●Adaptive detail control ●Triple skin tone detail control ●Electronic soft focus ●Full compatibility with current Sony Camera Control Units for seamless integration into Sony BVP-900P Series, BVP-700P Series and BVP-500P Series camera systems using existing Sony MSUs, CNUs and RCPs ●Compatible with Sony Wireless Camera System WLL-CA55 and WLL-RX55 ●Wideband component triax transmission system ●Fiber optic transmission system ●Auto tracing white balance
- Assignable switches ●Memory Stick system for storage/recall of parameters ●Menu knob ●Adjustable shoulder pad

(\*)25PsF

### Supplied Accessories

Operational manual (1)  
CD-ROM Operation manual (1)  
Label for assignable switch (1)

### Optional Accessories

CA-590P Camera Adaptor  
CA-570P Camera Adaptor  
CA-950P Camera Adaptor  
WLL-CA55 Wireless Camera Transmitter (CER)  
CA-905F Large Lens Adaptor (Fischer Type)  
CCU-590P Portable Camera Control Unit  
CCU-790P Camera Control Unit  
CCU-550AP Portable Camera Control Unit  
CCU-700AP Camera Control Unit  
CCU-900P Camera Control Unit  
WLL-RX55 Wireless Camera Receiver  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit  
MSU-700A Master Setup Unit  
MSU-750 Master Setup Unit  
RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
RCP-750 Remote Control Panel (Joystick type)  
RCP-751 Remote Control Panel (Dial control type)  
RCP-700 Remote Control Panel (Joystick Type)  
RCP-701 Remote Control Panel (Dial Control Type)  
CNU-700 Camera Command Network Unit  
CNU-500 Camera Command Network Unit  
VCS-700 Video Selector  
MSH "Memory Stick" IC Memory Media  
MSA-A "Memory Stick" IC Memory Media  
VCT-14 Tripod Adaptor

BVF-55CE 5-inch Type B/W Viewfinder (CCIR)  
BVF-10CE 1.5-inch Type B/W CRT Viewfinder (CCIR)

### Specifications

#### General

Power consumption:  
13 W  
Operating temperature:  
-20 °C to + 45 °C (-4 °F to +113 °F)  
Storage temperature:  
-20 °C to + 60 °C (-4 °F to +140 °F)  
Dimensions (W x H x D):  
125 x 285 x 291 mm (5 x 11 1/4 x 11 1/2 inches)  
Mass:  
Approx. 2.5 kg (5 lb 8 oz) (not including viewfinder)

#### Camera

A/D conversion:  
14 bits  
Optical system:  
F 1.4 prism  
Image device:  
3-chip 2/3-inch type Power HAD CCD  
Total picture elements (H x V):  
1038 x 1188  
Smear level (typical):  
-145 dB  
Scan format:  
50i, 25PsF  
Built in filters:  
1: CLEAR, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
Horizontal resolution (center):  
900 TV Lines  
Modulation depth (center):  
80%  
Vertical resolution:  
480 TV lines/530 TV lines (with EVS)

S/N ratio (typical):

65 dB

Sensitivity (typical):

F 11 at 2000 lx  
(3200K 89.9% reflectance)

Gain selection:

-3, 0, +3, +6, +9, +12, +18, +24, +30, +36, +42 dB

Set-up memory card:

Memory Stick

Shutter speed:

1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s

Clear scan:

1/25(\*) to 1/6000 s

#### Interface

Input connector:

Microphone: XLR 3-pin, -60 dBu

Output connector:

Test out: BNC type, 1.0 Vp-p, 75 Ω, unbalanced

Others:

Lens: 12-pin

View finder: 20-pin

Digital interface: 68-pin

Analog interface: 68-pin

Lens mount: Special bayonet mount (B4)

#### Eco-info

Lead-free solder is used for soldering.  
Halogenated flame retardants are not used in the cabinets and the printed wiring boards.

(\*)1/25-1/50 are on PsF mode.



Lens, CA and viewfinder are optional.

## Production Cameras

# BVP-E30WS 3-chip CCD Portable Color Camera

### Features

- Portable studio/OB/EPF camera ●Three-chip Power HAD EX CCD imager for superb picture quality
- Advanced digital signal processing and 14-bit A/D conversion ●Switchable progressive(\*) and interlace modes ●Excellent signal-to-noise ratio of 67 dB and remarkably low smear level of -145 dB (typical) ●High sensitivity of F11 at 2000 lx ●Digital 3-D white shading
- Cross color suppression function ●Low key saturation function ●Adaptive highlight control (Auto knee mode)
- Knee saturation control ●Multi-matrix function
- Enhanced vertical detail (Non-additive mix) ●Adaptive detail control ●Triple skin tone detail control ●Electronic soft focus ●Full compatibility with current Sony Camera Control Units for seamless integration into Sony BVP-900 Series, BVP-700 Series and BVP-500 Series camera systems using existing Sony MSUs, CNUs and RCPs
- Compatible with Sony Wireless Camera System WLL-CA55 and WLL-RX55 ●Wideband component triax transmission system ●Fiber optic transmission system
- CC filter- electronic and optical ●Auto tracing white balance ●Assignable switches ●Memory Stick system for storage/recall of parameters ●Menu knob ●Adjustable shoulder pad

(\*)29.97 PsF



Lens, CA and viewfinder are optional.

### Supplied Accessories

Operational manual (1)  
CD-ROM Operation manual (1)  
Label for assignable switch (1)

### Optional Accessories

CA-590 Camera Adaptor  
CA-570 Camera Adaptor  
CA-950 Camera Adaptor  
WLL-CA55 Wireless Camera Transmitter (UC)  
CA-905K Large Lens Adaptor (Kings Type)  
CCU-590 Portable Camera Control Unit  
CCU-790 Camera Control Unit  
CCU-550A Portable Camera Control Unit  
CCU-700A Camera Control Unit  
CCU-900 Camera Control Unit  
WLL-RX55 Wireless Camera Receiver  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit  
MSU-700A Master Setup Unit  
MSU-750 Master Setup Unit  
RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
RCP-750 Remote Control Panel (Joystick type)  
RCP-751 Remote Control Panel (Dial control type)  
RCP-700 Remote Control Panel (Joystick Type)  
RCP-701 Remote Control Panel (Dial Control Type)  
CNU-700 Camera Command Network Unit  
CNU-500 Camera Command Network Unit  
VCS-700 Video Selector  
MSA-A "Memory Stick" IC Memory Media  
MSH "Memory Stick" IC Memory Media  
VCT-14 Tripod Adaptor  
BVF-55 5-inch Type B/W Viewfinder (EIA)  
BVF-20W 2-inch Type 16:9 B/W Viewfinder

### Specifications

#### General

Power consumption:  
13 W  
Operating temperature:  
-20 °C to + 45 °C (-4 °F to +113 °F)  
Storage temperature:  
-20 °C to + 60 °C (-4 °F to +140 °F)  
Dimensions (W x H x D):  
125 x 285 x 291 mm (5 x 11 1/4 x 11 1/2 inches)  
Mass:  
Approx. 2.5 kg (5 lb 8 oz) (not including viewfinder)

#### Camera

A/D conversion:  
14 bits  
Optical system:  
F 1.4 prism  
Image device:  
3-chip 2/3-inch type Power HAD CCD  
Total picture elements (H x V):  
1038 x 1008  
Smear level (typical):  
-145 dB  
Scan format:  
59.94i, 29.97PsF  
Built in filters:  
1: CLEAR, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
A: CROSS, B: 3200K, C: 4300K, D: 6300K  
Horizontal resolution (center):  
700 TV Lines  
Modulation depth (center):  
80% (16:9)/60% (4:3)  
Vertical resolution:  
400 TV lines/450 TV lines (with EVS)  
S/N ratio (typical):  
67 dB

#### Sensitivity (typical):

F 11 at 2000 lx  
(3200K 89.9% reflectance)

#### Gain selection:

-3, 0, +3, +6, +9, +12, +18, +24, +30, +36, +42 dB

#### Set-up memory card:

Memory Stick

#### Shutter speed:

1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s

#### Clear scan:

1/30(\*) to 1/6000 s

#### Interface

##### Input connector:

Microphone: XLR 3-pin, -60 dBu

##### Output connector:

Test out: BNC type, 1.0 Vp-p, 75 Ω, unbalanced

##### Others:

Lens: 12-pin  
View finder: 20-pin  
Digital interface: 68-pin  
Analog interface: 68-pin  
Lens mount: Special bayonet mount (B4)

#### Eco-info

Lead-free solder is used for soldering.  
Halogenated flame retardants are not used in the cabinets and the printed wiring boards.

(\*)1/30-1/60 are on PsF mode.

## Production Cameras

# BVP-E30WSP 3-chip CCD Portable Color Camera

### Features

- Portable studio/OB/EPF camera ●Three-chip Power HAD EX CCD imager for superb picture quality
- Advanced digital signal processing and 14-bit A/D conversion ●Switchable progressive(\*) and interlace modes ●Excellent signal-to-noise ratio of 65 dB and remarkably low smear level of -145 dB (typical) ●High sensitivity of F11 at 2000 lx ●Digital 3-D white shading
- Cross color suppression function ●Low key saturation function ●Adaptive highlight control (Auto knee mode)
- Knee saturation control ●Multi-matrix function
- Enhanced vertical detail (Non-additive mix) ●Adaptive detail control ●Triple skin tone detail control ●Electronic soft focus ●Full compatibility with current Sony Camera Control Units for seamless integration into Sony BVP-900P Series, BVP-700P Series and BVP-500P Series camera systems using existing Sony MSUs, CNUs and RCPs ●Compatible with Sony Wireless Camera System WLL-CA55 and WLL-RX55 ●Wideband component triax transmission system ●Fiber optic transmission system ●CC filter- electronic and optical
- Auto tracing white balance ●Assignable switches
- Memory Stick system for storage/recall of parameters
- Menu knob ●Adjustable shoulder pad

(\*)25PsF



Lens, CA and viewfinder are optional.

Production Cameras

### Supplied Accessories

Operational manual (1)  
CD-ROM Operation manual (1)  
Label for assignable switch (1)

### Optional Accessories

CA-590P Camera Adaptor  
CA-570P Camera Adaptor  
CA-950P Camera Adaptor  
WLL-CA55 Wireless Camera Transmitter (CER)  
CA-905F Large Lens Adaptor (Fischer Type)  
CCU-590P Portable Camera Control Unit  
CCU-790P Camera Control Unit  
CCU-550AP Portable Camera Control Unit  
CCU-700AP Camera Control Unit  
CCU-900P Camera Control Unit  
WLL-RX55 Wireless Camera Receiver  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit  
MSU-700A Master Setup Unit  
MSU-750 Master Setup Unit  
RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
RCP-750 Remote Control Panel (Joystick type)  
RCP-751 Remote Control Panel (Dial control type)  
RCP-700 Remote Control Panel (Joystick Type)  
RCP-701 Remote Control Panel (Dial Control Type)  
CNU-700 Camera Command Network Unit  
CNU-500 Camera Command Network Unit  
VCS-700 Video Selector  
MSA-A "Memory Stick" IC Memory Media  
MSH "Memory Stick" IC Memory Media  
VCT-14 Tripod Adaptor

BVF-55CE 5-inch Type B/W Viewfinder (CCIR)  
BVF-20WCE 2-inch Type 16:9 B/W Viewfinder

### Specifications

#### General

Power consumption:  
13 W  
Operating temperature:  
-20 °C to + 45 °C (-4 °F to +113 °F)  
Storage temperature:  
-20 °C to + 60 °C (-4 °F to +140 °F)  
Dimensions (W x H x D):  
125 x 285 x 291 mm (5 x 11 1/4 x 11 1/2 inches)  
Mass:  
Approx. 2.5 kg (5 lb 8 oz) (not including viewfinder)

#### Camera

A/D conversion:  
14 bits  
Optical system:  
F 1.4 prism  
Image device:  
3-chip 2/3-inch type Power HAD CCD  
Total picture elements (H x V):  
1038 x 1188  
Smear level (typical):  
-145 dB  
Scan format:  
50i, 25PsF  
Built in filters:  
1: CLEAR, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
A: CROSS, B: 3200K, C: 4300K, D: 6300K  
Horizontal resolution (center):  
700 TV Lines  
Modulation depth (center):  
80% (16:9)/60% (4:3)  
Vertical resolution:  
480 TV lines/530 TV lines (with EVS)

S/N ratio (typical):

65 dB

Sensitivity (typical):

F 11 at 2000 lx  
(3200K 89.9% reflectance)

Gain selection:

-3, 0, +3, +6, +9, +12, +18, +24, +30, +36,  
+42 dB

Set-up memory card:

Memory Stick

Shutter speed:

1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s

Clear scan:

1/25(\*) to 1/6000 s

### Interface

Input connector:

Microphone: XLR 3-pin, -60 dBu

Output connector:

Test out: BNC type, 1.0 Vp-p, 75 Ω,  
unbalanced

Others:

Lens: 12-pin  
View finder: 20-pin  
Digital interface: 68-pin  
Analog interface: 68-pin  
Lens mount: Special bayonet mount (B4)

### Eco-info

Lead-free solder is used for soldering.  
Halogenated flame retardants are not used  
in the cabinets and the printed wiring  
boards.

(\*)1/25-1/50 are on PsF mode.

## Production Cameras

### DXC-D50H 3-chip CCD Portable Color Camera

#### Features

●Can be docked with the DSR-1 DVCAM Recorder or PVV-3 Betacam SP Recorder ●Compact and lightweight: 2.2 kg (4 lb 13 oz) for camera head only ●Three 2/3-inch type Power HAD CCDs offer low smear level characteristics, high sensitivity and high S/N ratio (65 dB), high horizontal resolution (920 TV lines) ●Hyper Gain (36 dB) ●12-bit AD converter and DSP (Digital Signal Processing) ●Knee Saturation process for faithful color reproduction even in highlight area ●Adaptive Highlight Control realize optimum contrast balance ●Skin-Tone Detail function with auto detection of active area ●Horizontal Detail Frequency Control ●Low Key Saturation function ●Cross-Color Suppression ●Black halo-free ●Total Level Control System (TLCS) for extended range of Iris control ●Auto Tracing White Balance (ATW) function ●EZ Mode and EZ Focus for quick camera setup ●Scene File Operation by RCP-D50/D51 ●File Operation using Memory Stick ●Optical Neutral Density (ND) filter and electronic Color Correction (CC) filter ●Clear Scan (CLS) Function



Lens, CA and viewfinder are optional.

#### Supplied Accessories

Camera head (1)  
 Camera handle (1)  
 Operating instructions (1)  
 Chart for flange focal (1)  
 Lens mount cap (1)

#### Optional Accessories

CA-D50 Camera Adaptor  
 CA-TX50 Camera Adaptor  
 CA-TX7 Camera Adaptor  
 DSR-1 Dockable Recorder  
 PVV-3 Betacam SP 2000PRO Dockable Recorder  
 CCU-D50 Camera Control Unit  
 CCU-TX50 Camera Control Unit  
 CCU-TX7 Camera Control Unit  
 COU-TX7 Camera Operational Unit  
 DXBK-701 SDI Output Board  
 RCP-D50 Remote Control Panel (Joystick Type)  
 RCP-D51 Remote Control Panel (Dial Control Type)  
 RM-M7G Remote Control Unit  
 AC-DN10 AC Adaptor/Charger  
 CMA-8A AC Adaptor  
 ECM-678 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (U)  
 ECM-670 Electret Condenser Microphone (E)  
 EC-0.3C2 Microphone cable  
 CAC-12 Camera Microphone Holder  
 DXF-51 5-inch Monochrome Viewfinder  
 VCT-U14 Tripod Adaptor  
 DR-100 Intercommunication Headset  
 LC-421 Carrying Case  
 LCR-1 Camera Rain Cover  
 CCZ-A Cables 26-pin/26-pin Cable  
 WRT-847A UHF Synthesized Transmitter Unit (AU)  
 WRT-847B UHF Synthesized Transmitter Unit (1416U)  
 WRT-847B UHF Synthesized Transmitter Unit (3032U)

WRT-847B UHF Synthesized Transmitter Unit (6264U)  
 WRT-847B UHF Synthesized Transmitter Unit (6668U)  
 WRT-822A UHF Synthesized Wireless Transmitter (64U)  
 WRT-822A UHF Synthesized Wireless Transmitter (AU)  
 WRT-822A UHF Synthesized Wireless Transmitter (66U)  
 WRT-822A UHF Synthesized Wireless Transmitter (68U)  
 WRT-822A UHF Synthesized Wireless Transmitter (KR)  
 WRT-822B UHF Synthesized Wireless Transmitter (1416U)  
 WRT-822B UHF Synthesized Wireless Transmitter (3032U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6264U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6668U)  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-861B UHF Synthesized Diversity Tuner (U6264)  
 WRR-861B UHF Synthesized Diversity Tuner (U6668)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

# Production Cameras

## Specifications

Image device:  
3-chip 2/3-inch type IT CCD

A/D conversion:  
12 bits

Optics:  
F1.4 medium index prism system

Effective picture elements (H x V):  
980 x 494

Total picture elements (H x V):  
1038 x 1008

Sensing area:  
6.6 mm x 8.8 mm

Built-in filters:  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Electronic filter:  
5600K (on/off)

Lens mount:  
Sony 2/3-inch Bayonet mount

Signal system:  
NTSC color system

Scanning system:  
2:1 interlaced, 525 lines, 60 fields/s

Horizontal frequency:  
15.734 kHz

Vertical frequency:  
59.94 Hz

Sync system:  
Internal or external with VBS or BS signal

Horizontal resolution:  
920 TV lines

Vertical resolution:  
400 TV lines (without EVS), 450 TV lines (with EVS)

Minimum illumination:  
0.5 lx with F1.4, Hyper Gain (36 dB)  
0.8 lx with F1.8, Hyper Gain (36 dB)

Sensitivity:  
F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)

Gain selection:  
-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB

Shutter speed selection:  
OFF, 1/100, 1/250, 1/500, 1/1000, 1/2000 s

Clear scan selection:  
60.1 to 6000 Hz

Signal-to-noise ratio:  
65 dB (typical)

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level

Power requirements:  
DC 12 V

Video output:  
Camera head BNC connector  
VBS: 1.0 Vp-p, sync negative  
26-pin connector of CA-D50  
VBS: 1.0 Vp-p, sync negative  
Y/R-Y/B-Y: Y: 1.0 Vp-p negative,  
R-Y/B-Y: 700 mVp-p  
RGB: 1.4 Vp-p  
Y/C: Y: 1.0 Vp-p negative, C: 286 mVp-p (burst level)

Input/output  
INTERFACE:  
Pro 76-pin DIGITAL, Pro 50-pin

VIDEO OUT:  
BNC

LENS:  
12-pin

VF:  
20-pin

MONITOR OUT:  
BNC type

REMOTE:  
10-pin

MIC IN:  
XLR 3-pin

Power requirements:  
DC 12 V (10.5 to 17 V)

Power consumption:  
14 W

Operating temperature:  
-10°C to 45°C (14°F to 113°F)

Operating humidity:  
Less than 85%

Storage humidity:  
Less than 90%

Mass (camera head only):  
2.2 kg (4 lb 13 oz)

Eco Info:  
Lead-free solder is used for soldering certain parts.  
Halogenated flame retardants are not used in cabinets.

Production Cameras



## Production Cameras

### DXC-D50K 3-chip CCD Portable Color Camera

#### Features

●Can be docked with the DSR-1 DVCAM Recorder or PVV-3 Betacam SP Recorder ●Compact and lightweight: 2.2 kg (4 lb 13 oz) for camera head only ●Three 2/3-inch type Power HAD CCDs offer low smear level characteristics, high sensitivity and high S/N ratio (65 dB), high horizontal resolution (920 TV lines) ●Hyper Gain (36 dB) ●12-bit AD converter and DSP (Digital Signal Processing) ●Knee Saturation process for faithful color reproduction even in highlight area ●Adaptive Highlight Control realize optimum contrast balance ●Skin-Tone Detail function with auto detection of active area ●Horizontal Detail Frequency Control ●Low Key Saturation function ●Cross-Color Suppression ●Black halo-free ●Total Level Control System (TLCS) for extended range of Iris control ●Auto Tracing White Balance (ATW) function ●EZ Mode and EZ Focus for quick camera setup ●Scene File Operation by RCP-D50/D51 ●File Operation using Memory Stick ●Optical Neutral Density (ND) filter and electronic Color Correction (CC) filter ●Clear Scan (CLS) Function



CA is an optional.

#### Supplied Accessories

Camera head (1)  
Camera handle (1)  
Operating instructions (1)  
Chart for flange focal (1)  
Lens mount cap (1)  
External Microphone (1)  
DXF-801 Viewfinder (1)  
Zoom Lens (1)  
VCT-U14 Tripod Adaptor (1)

#### Optional Accessories

CA-D50 Camera Adaptor  
CA-TX50 Camera Adaptor  
CA-TX7 Camera Adaptor  
DSR-1 Dockable Recorder  
PVV-3 Betacam SP 2000PRO Dockable Recorder  
CCU-D50 Camera Control Unit  
CCU-TX50 Camera Control Unit  
CCU-TX7 Camera Control Unit  
COU-TX7 Camera Operational Unit  
DXBK-701 SDI Output Board  
RCP-D50 Remote Control Panel (Joystick Type)  
RCP-D51 Remote Control Panel (Dial Control Type)  
RM-M7G Remote Control Unit  
AC-DN10 AC Adaptor/Charger  
CMA-8A AC Adaptor  
ECM-678 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone (U)  
ECM-670 Electret Condenser Microphone (E)  
EC-0.3C2 Microphone cable  
CAC-12 Camera Microphone Holder  
DXF-51 5-inch Monochrome Viewfinder  
DR-100 Intercommunication Headset  
LC-421 Carrying Case  
LCR-1 Camera Rain Cover  
CCZ-A Cables 26-pin/26-pin Cable  
WRT-847A UHF Synthesized Transmitter Unit (AU)  
WRT-847B UHF Synthesized Transmitter Unit (1416U)

WRT-847B UHF Synthesized Transmitter Unit (3032U)  
WRT-847B UHF Synthesized Transmitter Unit (6264U)  
WRT-847B UHF Synthesized Transmitter Unit (6668U)  
WRT-822A UHF Synthesized Wireless Transmitter (64U)  
WRT-822A UHF Synthesized Wireless Transmitter (AU)  
WRT-822A UHF Synthesized Wireless Transmitter (66U)  
WRT-822A UHF Synthesized Wireless Transmitter (68U)  
WRT-822A UHF Synthesized Wireless Transmitter (KR)  
WRT-822B UHF Synthesized Wireless Transmitter (1416U)  
WRT-822B UHF Synthesized Wireless Transmitter (3032U)  
WRT-822B UHF Synthesized Wireless Transmitter (6264U)  
WRT-822B UHF Synthesized Wireless Transmitter (6668U)  
WRR-861A UHF Synthesized Diversity Tuner (AU)  
WRR-861B UHF Synthesized Diversity Tuner (U6264)  
WRR-861B UHF Synthesized Diversity Tuner (U6668)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)  
  
Lenses supplied from Fujinon: A13 x 6.3 BERM/A20 x 8.6 BERM. Lenses supplied from Canon: YJ12 x 6.5 IRS/YJ19 x 9B IRS

Production Cameras

Specifications

Image device:  
3-chip 2/3-inch type IT CCD

A/D conversion:  
12 bits

Optics:  
F1.4 medium index prism system

Effective picture elements (H x V):  
980 x 494

Total picture elements (H x V):  
1038 x 1008

Sensing area:  
6.6 mm x 8.8 mm

Built-in filters:  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Electronic filter:  
5600K (on/off)

Lens mount:  
Sony 2/3-inch Bayonet mount

Signal system:  
NTSC color system

Scanning system:  
2:1 interlaced, 525 lines, 60 fields/s

Horizontal frequency:  
15.734 kHz

Vertical frequency:  
59.94 Hz

Sync system:  
Internal or external with VBS or BS signal

Horizontal resolution:  
920 TV lines

Vertical resolution:  
400 TV lines (without EVS), 450 TV lines (with EVS)

Minimum illumination:  
0.5 lx with F1.4, Hyper Gain (36 dB)  
0.8 lx with F1.8, Hyper Gain (36 dB)

Sensitivity:  
F11 at 2000 lx (3200K, 89.9% reflectance) (typical)

Gain selection:  
-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB

Shutter speed selection:  
OFF, 1/100, 1/250, 1/500, 1/1000, 1/2000 s

Clear scan selection:  
60.1 to 6000 Hz

Signal-to-noise ratio:  
65 dB (typical)

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level

Power requirements:  
DC 12 V

Video output:  
Camera head BNC connector  
VBS: 1.0 Vp-p, sync negative  
26-pin connector of CA-D50  
VBS: 1.0 Vp-p, sync negative  
Y/R-Y/B-Y: Y: 1.0 Vp-p negative,  
R-Y/B-Y: 700 mVp-p  
RGB: 1.4 Vp-p  
Y/C: Y: 1.0 Vp-p negative, C: 286 mVp-p (burst level)

Input/output

INTERFACE:  
Pro 76-pin DIGITAL, Pro 50-pin

VIDEO OUT:  
BNC

LENS:  
12-pin

VF:  
20-pin

MONITOR OUT:  
BNC type

REMOTE:  
10-pin

MIC IN:  
XLR 3-pin

Power requirements:  
DC 12 V (10.5 to 17 V)

Power consumption:  
14 W

Operating temperature:  
-10°C to 45°C (14°F to 113°F)

Operating humidity:  
Less than 85%

Storage humidity:  
Less than 90%

Mass (camera head only):  
2.2 kg (4 lb 13 oz)

Eco Info:  
Lead-free solder is used for soldering certain parts.  
Halogenated flame retardants are not used in cabinets.

Production Cameras



## Production Cameras

### DXC-D50L 3-chip CCD Portable Color Camera

#### Features

●Can be docked with the DSR-1 DVCAM Recorder or PVV-3 Betacam SP Recorder ●Compact and lightweight: 2.2 kg (4 lb 13 oz) for camera head only ●Three 2/3-inch type Power HAD CCDs offer low smear level characteristics, high sensitivity and high S/N ratio (65 dB), high horizontal resolution (920 TV lines) ●Hyper Gain (36 dB) ●12-bit AD converter and DSP (Digital Signal Processing) ●Knee Saturation process for faithful color reproduction even in highlight area ●Adaptive Highlight Control realize optimum contrast balance ●Skin-Tone Detail function with auto detection of active area ●Horizontal Detail Frequency Control ●Low Key Saturation function ●Cross-Color Suppression ●Black halo-free ●Total Level Control System (TLCS) for extended range of Iris control ●Auto Tracing White Balance (ATW) function ●EZ Mode and EZ Focus for quick camera setup ●Scene File Operation by RCP-D50/D51 ●File Operation using Memory Stick ●Optical Neutral Density (ND) filter and electronic Color Correction (CC) filter ●Clear Scan (CLS) Function



Lens and CA are optional.

#### Supplied Accessories

Camera head (1)  
 Camera handle (1)  
 Operating instructions (1)  
 Chart for flange focal (1)  
 Lens mount cap (1)  
 External Microphone (1)  
 DXF-801 Viewfinder (1)  
 VCT-U14 Tripod Adaptor (1)

#### Optional Accessories

CA-D50 Camera Adaptor  
 CA-TX50 Camera Adaptor  
 CA-TX7 Camera Adaptor  
 DSR-1 Dockable Recorder  
 PVV-3 Betacam SP 2000PRO Dockable Recorder  
 CCU-D50 Camera Control Unit  
 CCU-TX50 Camera Control Unit  
 CCU-TX7 Camera Control Unit  
 COU-TX7 Camera Operational Unit  
 DXBK-701 SDI Output Board  
 RCP-D50 Remote Control Panel (Joystick Type)  
 RCP-D51 Remote Control Panel (Dial Control Type)  
 RM-M7G Remote Control Unit  
 AC-DN10 AC Adaptor/Charger  
 CMA-8A AC Adaptor  
 ECM-678 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (U)  
 ECM-670 Electret Condenser Microphone (E)  
 EC-0.3C2 Microphone cable  
 CAC-12 Camera Microphone Holder  
 DXF-51 5-inch Monochrome Viewfinder  
 DR-100 Intercommunication Headset  
 CCZ-A Cables 26-pin/26-pin Cable  
 LC-421 Carrying Case  
 LCR-1 Camera Rain Cover  
 WRT-847A UHF Synthesized Transmitter Unit (AU)  
 WRT-847B UHF Synthesized Transmitter Unit (1416U)

WRT-847B UHF Synthesized Transmitter Unit (3032U)  
 WRT-847B UHF Synthesized Transmitter Unit (6264U)  
 WRT-847B UHF Synthesized Transmitter Unit (6668U)  
 WRT-822A UHF Synthesized Wireless Transmitter (64U)  
 WRT-822A UHF Synthesized Wireless Transmitter (AU)  
 WRT-822A UHF Synthesized Wireless Transmitter (66U)  
 WRT-822A UHF Synthesized Wireless Transmitter (68U)  
 WRT-822A UHF Synthesized Wireless Transmitter (KR)  
 WRT-822B UHF Synthesized Wireless Transmitter (1416U)  
 WRT-822B UHF Synthesized Wireless Transmitter (3032U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6264U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6668U)  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-861B UHF Synthesized Diversity Tuner (U6264)  
 WRR-861B UHF Synthesized Diversity Tuner (U6668)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

# Production Cameras

## Specifications

Image device:  
3-chip 2/3-inch type IT CCD

A/D conversion:  
12 bits

Optics:  
F1.4 medium index prism system

Effective picture elements (H x V):  
980 x 494

Total picture elements (H x V):  
1038 x 1008

Sensing area:  
6.6 mm x 8.8 mm

Built-in filters:  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Electronic filter:  
5600K (on/off)

Lens mount:  
Sony 2/3-inch Bayonet mount

Signal system:  
NTSC color system

Scanning system:  
2:1 interlaced, 525 lines, 60 fields/s

Horizontal frequency:  
15.734 kHz

Vertical frequency:  
59.94 Hz

Sync system:  
Internal or external with VBS or BS signal

Horizontal resolution:  
920 TV lines

Vertical resolution:  
400 TV lines (without EVS), 450 TV lines (with EVS)

Minimum illumination:  
0.5 lx with F1.4, Hyper Gain (36 dB)  
0.8 lx with F1.8, Hyper Gain (36 dB)

Sensitivity:  
F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)

Gain selection:  
-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB

Shutter speed selection:  
OFF, 1/100, 1/250, 1/500, 1/1000, 1/2000 s

Clear scan selection:  
60.1 to 6000 Hz

Signal-to-noise ratio:  
65 dB (typical)

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level

Power requirements:  
DC12V

Video output:  
Camera head BNC connector  
VBS: 1.0 Vp-p, sync negative  
26-pin connector of CA-D50  
VBS: 1.0 Vp-p, sync negative  
Y/R-Y/B-Y: Y: 1.0 Vp-p negative,  
R-Y/B-Y: 700 mVp-p  
RGB: 1.4 Vp-p  
Y/C: Y: 1.0 Vp-p negative, C: 286 mVp-p (burst level)

Input/output  
INTERFACE:  
Pro 76-pin DIGITAL, Pro 50-pin

VIDEO OUT:  
BNC

LENS:  
12-pin

VF:  
20-pin

MONITOR OUT:  
BNC type

REMOTE:  
10-pin

MIC IN:  
XLR 3-pin

Power requirements:  
DC 12 V (10.5 to 17 V)

Power consumption:  
14 W

Operating temperature:  
-10°C to 45°C (14°F to 113°F)

Operating humidity:  
Less than 85%

Storage humidity:  
Less than 90%

Mass (camera head only):  
2.2 kg (4 lb 13 oz)

Eco Info:  
Lead-free solder is used for soldering certain parts.  
Halogenated flame retardants are not used in cabinets.

Production Cameras



## Production Cameras

### DXC-D50PH 3-chip CCD Portable Color Camera

#### Features

•Can be docked with the DSR-1 DVCAM Recorder or PVV-3 Betacam SP Recorder •Compact and lightweight: 2.2 kg (4 lb 13 oz) for camera head only •Three 2/3-inch type Power HAD CCDs offer low smear level characteristics, high sensitivity and high S/N ratio (63 dB), high horizontal resolution (920 TV lines) •Hyper Gain (36 dB) •12-bit AD converter and DSP (Digital Signal Processing) •Knee Saturation process for faithful color reproduction even in highlight area •Adaptive Highlight Control realize optimum contrast balance •Skin-Tone Detail function with auto detection of active area •Horizontal Detail Frequency Control •Low Key Saturation function •Cross-Color Suppression •Black halo-free •Total Level Control System (TLCS) for extended range of Iris control •Auto Tracing White Balance (ATW) function •EZ Mode and EZ Focus for quick camera setup •Scene File Operation by RCP-D50/D51 •File Operation using Memory Stick •Optical Neutral Density (ND) filter and electronic Color Correction (CC) filter •Clear Scan (CLS) Function



Lens, CA and viewfinder are optional.

#### Supplied Accessories

Camera head (1)  
 Camera handle (1)  
 Operating instructions (1)  
 Chart for flange focal (1)  
 Lens mount cap (1)

#### Optional Accessories

CA-D50 Camera Adaptor  
 CA-TX50P Camera Adaptor  
 CA-TX7P Camera Adaptor  
 DSR-1P Dockable Recorder  
 PVV-3P Betacam SP 2000PRO Dockable Recorder  
 CCU-D50P Camera Control Unit  
 CCU-TX50P Camera Control Unit  
 CCU-TX7P Camera Control Unit  
 COU-TX7 Camera Operational Unit  
 DXBK-701 SDI Output Board  
 RCP-D50 Remote Control Panel (Joystick Type)  
 RCP-D51 Remote Control Panel (Dial Control Type)  
 RM-M7G Remote Control Unit  
 AC-DN10 AC Adaptor/Charger  
 CMA-8ACE AC Adaptor  
 ECM-678 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (U)  
 ECM-670 Electret Condenser Microphone (E)  
 EC-0.3C2 Microphone cable  
 CAC-12 Camera Microphone Holder  
 DXF-51 5-inch Monochrome Viewfinder  
 VCT-U14 Tripod Adaptor  
 DR-100 Intercommunication Headset  
 CCZ-A Cables 26-pin/26-pin Cable  
 LC-421 Carrying Case  
 LCR-1 Camera Rain Cover  
 WRT-847B UHF Synthesized Transmitter Unit (21CE7)  
 WRT-847B UHF Synthesized Transmitter Unit (33CE7)  
 WRT-847B UHF Synthesized Transmitter Unit (62CE7)

WRT-847B UHF Synthesized Transmitter Unit (67CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (62CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (AU)  
 WRT-822A UHF Synthesized Wireless Transmitter (69CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (21CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (33CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (62CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (67CE7)  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

# Production Cameras

## Specifications

Image device:  
3-chip 2/3-inch type IT CCD

A/D conversion:  
12 bits

Optics:  
F1.4 medium index prism system

Effective picture elements (H x V):  
980 x 586

Total picture elements (H x V):  
1038 x 1188

Sensing area:  
6.6 mm x 8.8 mm

Built-in filters:  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Electronic filter:  
5600K (on/off)

Lens mount:  
Sony 2/3-inch Bayonet mount

Signal system:  
PAL color system

Scanning system:  
2:1 interlaced, 525 lines, 60 fields/s

Horizontal frequency:  
15.625 kHz

Vertical frequency:  
50 Hz

Sync system:  
Internal or external with VBS or BS signal

Horizontal resolution:  
920 TV lines

Vertical resolution:  
480 TV lines (without EVS), 530 TV lines (with EVS)

Minimum illumination:  
0.5 lx with F1.4, Hyper Gain (36 dB)  
0.8 lx with F1.8, Hyper Gain (36 dB)

Sensitivity:  
F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)

Gain selection:  
-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB

Shutter speed selection:  
OFF, 1/60, 1/250, 1/500, 1/1000, 1/2000 s

Clear scan selection:  
50.2 to 6000 Hz

Signal-to-noise ratio:  
63 dB (typical)

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level

Power requirements:  
DC 12 V

Video output:  
Camera head BNC connector  
VBS: 1.0 Vp-p, sync negative  
26-pin connector of CA-D50  
VBS: 1.0 Vp-p, sync negative  
Y/R-Y/B-Y: Y: 1.0 Vp-p negative,  
R-Y/B-Y: 525 mVp-p  
RGB: 1.4 Vp-p  
Y/C: Y: 1.0 Vp-p negative, C: 300 mVp-p (burst level)

Input/output  
INTERFACE:  
Pro 76-pin DIGITAL, Pro 50-pin

VIDEO OUT:  
BNC

LENS:  
12-pin

VF:  
20-pin

MONITOR OUT:  
BNC type

REMOTE:  
10-pin

MIC IN:  
XLR 3-pin

Power requirements:  
DC 12 V (10.5 to 17 V)

Power consumption:  
14 W

Operating temperature:  
-10°C to 45°C (14°F to 113°F)

Operating humidity:  
Less than 85%

Storage humidity:  
Less than 90%

Mass (camera head only):  
2.2 kg (4 lb 13 oz)

Eco Info:  
Lead-free solder is used for soldering certain parts.  
Halogenated flame retardants are not used in cabinets.



## Production Cameras

# DXC-D50PK 3-chip CCD Portable Color Camera

### Features

●Can be docked with the DSR-1 DVCAM Recorder or PVV-3 Betacam SP Recorder ●Compact and lightweight: 2.2 kg (4 lb 13 oz) for camera head only ●Three 2/3-inch type Power HAD CCDs offer low smear level characteristics, high sensitivity and high S/N ratio (63 dB), high horizontal resolution (920 TV lines) ●Hyper Gain (36 dB) ●12-bit AD converter and DSP (Digital Signal Processing) ●Knee Saturation process for faithful color reproduction even in highlight area ●Adaptive Highlight Control realize optimum contrast balance ●Skin-Tone Detail function with auto detection of active area ●Horizontal Detail Frequency Control ●Low Key Saturation function ●Cross-Color Suppression ●Black halo-free ●Total Level Control System (TLCS) for extended range of Iris control ●Auto Tracing White Balance (ATW) function ●EZ Mode and EZ Focus for quick camera setup ●Scene File Operation by RCP-D50/D51 ●File Operation using Memory Stick ●Optical Neutral Density (ND) filter and electronic Color Correction (CC) filter ●Clear Scan (CLS) Function



CA is an optional.

### Supplied Accessories

Camera head (1)  
 Camera handle (1)  
 Operating instructions (1)  
 Chart for flange focal (1)  
 Lens mount cap (1)  
 External Microphone (1)  
 DXF-801 Viewfinder (1)  
 Zoom Lens (1)  
 VCT-U14 Tripod Adaptor (1)

### Optional Accessories

CA-D50 Camera Adaptor  
 CA-TX50P Camera Adaptor  
 CA-TX7P Camera Adaptor  
 DSR-1P Dockable Recorder  
 PVV-3P Betacam SP 2000PRO Dockable Recorder  
 CCU-D50P Camera Control Unit  
 CCU-TX50P Camera Control Unit  
 CCU-TX7P Camera Control Unit  
 COU-TX7 Camera Operational Unit  
 DXBK-701 SDI Output Board  
 RCP-D50 Remote Control Panel (Joystick Type)  
 RCP-D51 Remote Control Panel (Dial Control Type)  
 RM-M7G Remote Control Unit  
 AC-DN10 AC Adaptor/Charger  
 CMA-8ACE AC Adaptor  
 ECM-678 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (U)  
 ECM-670 Electret Condenser Microphone (E)  
 EC-0.3C2 Microphone cable  
 CAC-12 Camera Microphone Holder  
 DXF-51 5-inch Monochrome Viewfinder  
 DR-100 Intercommunication Headset  
 CCZ-A Cables 26-pin/26-pin Cable  
 LC-421 Carrying Case  
 LCR-1 Camera Rain Cover  
 WRT-847A UHF Synthesized Transmitter Unit (AU)  
 WRT-847B UHF Synthesized Transmitter Unit (21CE7)

WRT-847B UHF Synthesized Transmitter Unit (33CE7)  
 WRT-847B UHF Synthesized Transmitter Unit (62CE7)  
 WRT-847B UHF Synthesized Transmitter Unit (67CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (62CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (AU)  
 WRT-822B UHF Synthesized Wireless Transmitter (62CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (67CE7)  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

Lenses supplied from Fujinon: A13 x 6.3 BERM/A20 x 8.6 BERM. Lenses supplied from Canon: YJ12 x 6.5 IRS/YJ19 x 9B IRS

# Production Cameras

## Specifications

Image device:  
3-chip 2/3-inch type IT CCD

A/D conversion:  
12 bits

Optics:  
F1.4 medium index prism system

Effective picture elements (H x V):  
980 x 586

Total picture elements (H x V):  
1038 x 1188

Sensing area:  
6.6 mm x 8.8 mm

Built-in filters:  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Electronic filter:  
5600K (on/off)

Lens mount:  
Sony 2/3-inch Bayonet mount

Signal system:  
PAL color system

Scanning system:  
2:1 interlaced, 525 lines, 60 fields/s

Horizontal frequency:  
15.625 kHz

Vertical frequency:  
50 Hz

Sync system:  
Internal or external with VBS or BS signal

Horizontal resolution:  
920 TV lines

Vertical resolution:  
480 TV lines (without EVS), 530 TV lines (with EVS)

Minimum illumination:  
0.5 lx with F1.4, Hyper Gain (36 dB)  
0.8 lx with F1.8, Hyper Gain (36 dB)

Sensitivity:  
F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)

Gain selection:  
-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB

Shutter speed selection:  
OFF, 1/60, 1/250, 1/500, 1/1000, 1/2000 s

Clear scan selection:  
50.2 to 6000 Hz

Signal-to-noise ratio:  
63 dB (typical)

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level

Power requirements:  
DC 12 V

Video output:  
Camera head BNC connector  
VBS: 1.0 Vp-p, sync negative  
26-pin connector of CA-D50  
VBS: 1.0 Vp-p, sync negative  
Y/R-Y/B-Y: Y: 1.0 Vp-p negative,  
R-Y/B-Y: 525 mVp-p  
RGB: 1.4 Vp-p  
Y/C: Y: 1.0 Vp-p negative, C: 300 mVp-p (burst level)

Input/output  
INTERFACE:  
Pro 76-pin DIGITAL, Pro 50-pin

VIDEO OUT:  
BNC

LENS:  
12-pin

VF:  
20-pin

MONITOR OUT:  
BNC type

REMOTE:  
10-pin

MIC IN:  
XLR 3-pin

Power requirements:  
DC 12V (10.5 to 17 V)

Power consumption:  
14 W

Operating temperature:  
-10°C to 45°C (14°F to 113°F)

Operating humidity:  
Less than 85%

Storage humidity:  
Less than 90%

Mass (camera head only):  
2.2 kg (4 lb 13 oz)

Eco Info:  
Lead-free solder is used for soldering certain parts.  
Halogenated flame retardants are not used in cabinets.

Production Cameras



## Production Cameras

### DXC-D50PL 3-chip CCD Portable Color Camera

#### Features

●Can be docked with the DSR-1 DVCAM Recorder or PVV-3 Betacam SP Recorder ●Compact and lightweight: 2.2 kg (4 lb 13 oz) for camera head only ●Three 2/3-inch type Power HAD CCDs offer low smear level characteristics, high sensitivity and high S/N ratio (63 dB), high horizontal resolution (920 TV lines) ●Hyper Gain (36 dB) ●12-bit AD converter and DSP (Digital Signal Processing) ●Knee Saturation process for faithful color reproduction even in highlight area ●Adaptive Highlight Control realize optimum contrast balance ●Skin-Tone Detail function with auto detection of active area ●Horizontal Detail Frequency Control ●Low Key Saturation function ●Cross-Color Suppression ●Black halo-free ●Total Level Control System (TLCS) for extended range of Iris control ●Auto Tracing White Balance (ATW) function ●EZ Mode and EZ Focus for quick camera setup ●Scene File Operation by RCP-D50/D51 ●File Operation using Memory Stick ●Optical Neutral Density (ND) filter and electronic Color Correction (CC) filter ●Clear Scan (CLS) Function



Lens and CA are optional.

#### Supplied Accessories

Camera head (1)  
 Camera handle (1)  
 Operating instructions (1)  
 Chart for flange focal (1)  
 Lens mount cap (1)  
 Wind screen (1)  
 External Microphone (1)  
 DXF-801 Viewfinder (1)  
 VCT-U14 Tripod Adaptor (1)

#### Optional Accessories

CA-D50 Camera Adaptor  
 CA-TX50P Camera Adaptor  
 CA-TX7P Camera Adaptor  
 DSR-1P Dockable Recorder  
 PVV-3P Betacam SP 2000PRO Dockable Recorder  
 CCU-D50P Camera Control Unit  
 CCU-TX50P Camera Control Unit  
 CCU-TX7P Camera Control Unit  
 COU-TX7 Camera Operational Unit  
 DXBK-701 SDI Output Board  
 RCP-D50 Remote Control Panel (Joystick Type)  
 RCP-D51 Remote Control Panel (Dial Control Type)  
 RM-M7G Remote Control Unit  
 AC-DN10 AC Adaptor/Charger  
 CMA-8ACE AC Adaptor  
 ECM-678 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (U)  
 ECM-670 Electret Condenser Microphone (E)  
 EC-0.3C2 Microphone cable  
 CAC-12 Camera Microphone Holder  
 DXF-51 5-inch Monochrome Viewfinder  
 DR-100 Intercommunication Headset  
 CCZ-A Cables 26-pin/26-pin Cable  
 LC-421 Carrying Case  
 LCR-1 Camera Rain Cover  
 WRT-847A UHF Synthesized Transmitter Unit (AU)  
 WRT-847B UHF Synthesized Transmitter Unit (21CE7)

WRT-847B UHF Synthesized Transmitter Unit (33CE7)  
 WRT-847B UHF Synthesized Transmitter Unit (62CE7)  
 WRT-847B UHF Synthesized Transmitter Unit (67CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (62CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (AU)  
 WRT-822A UHF Synthesized Wireless Transmitter (69CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (21CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (33CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (62CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (67CE7)  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

## Production Cameras

### Specifications

#### Image device:

3-chip 2/3-inch type IT CCD

#### A/D conversion:

12 bits

#### Optics:

F1.4 medium index prism system

#### Effective picture elements (H x V):

980 x 586

#### Total picture elements (H x V):

1038 x 1188

#### Sensing area:

6.6 mm x 8.8 mm

#### Built-in filters:

1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

#### Electronic filter:

5600K (on/off)

#### Lens mount:

Sony 2/3-inch Bayonet mount

#### Signal system:

PAL color system

#### Scanning system:

2:1 interlaced, 525 lines, 60 fields/s

#### Horizontal frequency:

15.625 kHz

#### Vertical frequency:

50 Hz

#### Sync system:

Internal or external with VBS or BS signal

#### Horizontal resolution:

920 TV lines

#### Vertical resolution:

480 TV lines (without EVS), 530 TV lines (with EVS)

#### Minimum illumination:

0.5 lx with F1.4, Hyper Gain (36 dB)

0.8 lx with F1.8, Hyper Gain (36 dB)

#### Sensitivity:

F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)

#### Gain selection:

-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB

#### Shutter speed selection:

OFF, 1/60, 1/250, 1/500, 1/1000, 1/2000 s

#### Clear scan selection:

50.2 to 6000 Hz

#### Signal-to-noise ratio:

63 dB (typical)

#### Registration:

0.05% (all zones, without lens)

#### Geometric distortion:

Below measurable level

#### Power requirements:

DC 12 V

#### Video output:

Camera head BNC connector

VBS: 1.0 Vp-p, sync negative



## Production Cameras

# DXC-D50WSH 3-chip CCD Portable Color Camera

### Features

•Can be docked with the DSR-1 DVCAM Recorder or PVV-3 Betacam SP Recorder •Compact and lightweight: 2.2 kg (4 lb 13 oz) for camera head only •Three 2/3-inch type Power HAD CCDs offer low smear level characteristics, high sensitivity and high S/N ratio (65 dB), and high horizontal resolution (850 TV lines/4:3 mode, 800 TV lines/16:9 mode) •16:9 and 4:3 Switchable •16:9 ID Pulse •Hyper Gain (36 dB) •12-bit AD converter and DSP (Digital Signal Processing) •Knee Saturation process for faithful color reproduction even in highlight area •Adaptive Highlight Control realize optimum contrast balance •Skin-Tone Detail function with auto detection of active area •Horizontal Detail Frequency Control •Low Key Saturation function •Cross-Color Suppression •Black halo-free •Total Level Control System (TLCS) for extended range of Iris control •Auto Tracing White Balance (ATW) function •EZ Mode and EZ Focus for quick camera setup •Scene File Operation by RCP-D50/D51 •File Operation using Memory Stick •Clear Scan (CLS) Function



Lens, CA and viewfinder are optional.

### Supplied Accessories

Camera head (1)  
 Camera handle (1)  
 Operating instructions (1)  
 Chart for flange focal (1)  
 Lens mount cap (1)

### Optional Accessories

CA-D50 Camera Adaptor  
 CA-TX50 Camera Adaptor  
 CA-TX7 Camera Adaptor  
 DSR-1 Dockable Recorder  
 PVV-3 Betacam SP 2000PRO Dockable Recorder  
 CCU-D50 Camera Control Unit  
 CCU-TX50 Camera Control Unit  
 CCU-TX7 Camera Control Unit  
 COU-TX7 Camera Operational Unit  
 DXBK-701 SDI Output Board  
 RCP-D50 Remote Control Panel (Joystick Type)  
 RCP-D51 Remote Control Panel (Dial Control Type)  
 RM-M7G Remote Control Unit  
 AC-DN10 AC Adaptor/Charger  
 CMA-8A AC Adaptor  
 ECM-678 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (U)  
 ECM-670 Electret Condenser Microphone (E)  
 EC-0.3C2 Microphone cable  
 CAC-12 Camera Microphone Holder  
 DXF-51 5-inch Monochrome Viewfinder  
 VCT-U14 Tripod Adaptor  
 DR-100 Intercommunication Headset  
 LC-421 Carrying Case  
 LCR-1 Camera Rain Cover  
 CCZ-A Cables 26-pin/26-pin Cable  
 WRT-847A UHF Synthesized Transmitter Unit (AU)  
 WRT-847B UHF Synthesized Transmitter Unit (1416U)  
 WRT-847B UHF Synthesized Transmitter Unit (3032U)

WRT-847B UHF Synthesized Transmitter Unit (6264U)  
 WRT-847B UHF Synthesized Transmitter Unit (6668U)  
 WRT-822A UHF Synthesized Wireless Transmitter (64U)  
 WRT-822A UHF Synthesized Wireless Transmitter (AU)  
 WRT-822A UHF Synthesized Wireless Transmitter (66U)  
 WRT-822A UHF Synthesized Wireless Transmitter (68U)  
 WRT-822A UHF Synthesized Wireless Transmitter (KR)  
 WRT-822B UHF Synthesized Wireless Transmitter (1416U)  
 WRT-822B UHF Synthesized Wireless Transmitter (3032U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6264U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6668U)  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-861B UHF Synthesized Diversity Tuner (U6264)  
 WRR-861B UHF Synthesized Diversity Tuner (U6668)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

Production Cameras

Specifications

General

Power requirements  
DC 12 V (10.5 to 17 V)  
Power consumption  
14 W  
Operating temperature  
-10 °C to 45°C (14°F to 113 °F)  
Storage temperature  
-20 °C to 60 °C (-4 °F to 140 °F)  
Operating humidity  
Less than 85%  
Mass (camera head only)  
2.2 kg (4 lb 13 oz)  
Dimensions (W x H x D)  
126 x 258 x 265 mm (5 x 10 1/4 x 10 5/8 inches), camera head only

Signal inputs/outputs

Video output  
Analog composite, BNC, 1.0 Vp-p, sync negative  
Monitor output  
Analog composite, BNC, 1.0 Vp-p, sync negative  
Microphone input  
XLR-3-pin

Other inputs/outputs

Camera/VTR interface  
Pro 76-pin Digital, Pro 50-pin  
Lens  
12-pin  
VF  
20-pin  
Remote  
10-pin

Camera performance

Pickup device  
3-chip 2/3-inch type Power HAD EX CCD  
Aspect ratio  
4:3  
Total picture elements (H x V)  
1038 x 1008  
Effective picture elements (H x V)  
980 x 494  
Optical system  
F1.4 medium index prism system  
Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
Lens mount  
Sony 2/3-inch Bayonet mount  
Signal system  
NTSC color system  
Scan format  
2:1 interlaced, 525 lines, 60 fields/s  
Horizontal scan frequency  
15.734 kHz  
Vertical scan frequency  
59.94 Hz  
Sync system  
Internal and External with the VBS or BS signal  
A/D conversion  
12 bits  
Sensitivity  
F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)  
Minimum illumination  
0.5 lx with F1.4, Hyper gain (36 dB), 0.8 lx with F1.8, Hyper gain (36 dB)  
Video S/N ratio (typical)  
65 dB  
Horizontal resolution  
920 TV lines

Vertical resolution  
400 TV lines (without EVS), 450 TV lines (with EVS)  
Shutter speed  
OFF, 1/100, 1/250, 1/500, 1/1000, 1/2000 s  
Clear scan  
60.1 to 6000 Hz  
Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36 dB  
Registration  
0.05% (all zones, without lens)  
Geometric distortion  
Below measurable level



Production Cameras

## Production Cameras

### DXC-D50WSL 3-chip CCD Portable Color Camera

#### Features

●Can be docked with the DSR-1 DVCAM Recorder or PVV-3 Betacam SP Recorder ●Compact and lightweight: 2.2 kg (4 lb 13 oz) for camera head only ●Three 2/3-inch type Power HAD CCDs offer low smear level characteristics, high sensitivity and high S/N ratio (65 dB), and high horizontal resolution (850 TV lines/4:3 mode, 800 TV lines/16:9 mode) ●16:9 and 4:3 Switchable ●16:9 ID Pulse ●Hyper Gain (36 dB) ●12-bit AD converter and DSP (Digital Signal Processing) ●Knee Saturation process for faithful color reproduction even in highlight area ●Adaptive Highlight Control realize optimum contrast balance ●Skin-Tone Detail function with auto detection of active area ●Horizontal Detail Frequency Control ●Low Key Saturation function ●Cross-Color Suppression ●Black halo-free ●Total Level Control System (TLCS) for extended range of Iris control ●Auto Tracing White Balance (ATW) function ●EZ Mode and EZ Focus for quick camera setup ●Scene File Operation by RCP-D50/D51 ●File Operation using Memory Stick ●Clear Scan (CLS) Function



Lens and CA are optional.

#### Supplied Accessories

Camera head (1)  
 Camera handle (1)  
 Operating instructions (1)  
 Chart for flange focal (1)  
 Lens mount cap (1)  
 External Microphone (1)  
 DXF-801 Viewfinder (1)  
 VCT-U14 Tripod Adaptor (1)

#### Optional Accessories

CA-D50 Camera Adaptor  
 CA-TX50 Camera Adaptor  
 CA-TX7 Camera Adaptor  
 DSR-1 Dockable Recorder  
 PVV-3 Betacam SP 2000PRO Dockable Recorder  
 CCU-D50 Camera Control Unit  
 CCU-TX50 Camera Control Unit  
 CCU-TX7 Camera Control Unit  
 COU-TX7 Camera Operational Unit  
 DXBK-701 SDI Output Board  
 RCP-D50 Remote Control Panel (Joystick Type)  
 RCP-D51 Remote Control Panel (Dial Control Type)  
 RM-M7G Remote Control Unit  
 AC-DN10 AC Adaptor/Charger  
 CMA-8A AC Adaptor  
 ECM-678 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (U)  
 ECM-670 Electret Condenser Microphone (E)  
 EC-0.3C2 Microphone cable  
 CAC-12 Camera Microphone Holder  
 DXF-51 5-inch Monochrome Viewfinder  
 DR-100 Intercommunication Headset  
 CCZ-A Cables 26-pin/26-pin Cable  
 LC-421 Carrying Case  
 LCR-1 Camera Rain Cover  
 WRT-847A UHF Synthesized Transmitter Unit (AU)  
 WRT-847B UHF Synthesized Transmitter Unit (1416U)

WRT-847B UHF Synthesized Transmitter Unit (3032U)  
 WRT-847B UHF Synthesized Transmitter Unit (6264U)  
 WRT-847B UHF Synthesized Transmitter Unit (6668U)  
 WRT-822A UHF Synthesized Wireless Transmitter (64U)  
 WRT-822A UHF Synthesized Wireless Transmitter (AU)  
 WRT-822A UHF Synthesized Wireless Transmitter (66U)  
 WRT-822A UHF Synthesized Wireless Transmitter (68U)  
 WRT-822A UHF Synthesized Wireless Transmitter (KR)  
 WRT-822B UHF Synthesized Wireless Transmitter (1416U)  
 WRT-822B UHF Synthesized Wireless Transmitter (3032U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6264U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6668U)  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-861B UHF Synthesized Diversity Tuner (U6264)  
 WRR-861B UHF Synthesized Diversity Tuner (U6668)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

Production Cameras

Specifications

Image device:  
3-chip 2/3-inch type IT CCD

A/D conversion:  
12 bits

Optics:  
F1.4 medium index prism system

Effective picture elements (H x V):  
980 x 494

Total picture elements (H x V):  
1038 x 1008

Sensing area:  
9.6 mm x 5.4 mm

Built-in filters:  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Electronic filter:  
5600K (on/off)

Lens mount:  
Sony 2/3-inch Bayonet mount

Signal system:  
NTSC color system

Scanning system:  
2:1 interlaced, 525 lines, 60 fields/s

Horizontal frequency:  
15.734 kHz

Vertical frequency:  
59.94 Hz

Sync system:  
Internal or external with VBS or BS signal

Horizontal resolution:  
850 TV lines (4:3 mode), 800 TV lines (16:9 mode)

Vertical resolution:  
400 TV lines (without EVS), 450 TV lines (with EVS)

Minimum illumination:  
0.5 lx with F1.4, Hyper Gain (36 dB)  
0.8 lx with F1.8, Hyper Gain (36 dB)

Sensitivity:  
F11 at 2000 lx (3200K, 89.9% reflectance) (typical)

Gain selection:  
-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB

Shutter speed selection:  
OFF, 1/100, 1/250, 1/500, 1/1000, 1/2000 s

Clear scan selection:  
60.1 to 6000 Hz

Signal-to-noise ratio:  
65 dB (typical)

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level

Power requirements:  
DC 12 V

Video output:  
Camera head BNC connector  
VBS: 1.0 Vp-p, sync negative  
26-pin connector of CA-D50  
VBS: 1.0 Vp-p, sync negative  
Y/R-Y/B-Y: Y: 1.0 Vp-p negative,  
R-Y/B-Y: 700 mVp-p  
RGB: 1.4 Vp-p  
Y/C: Y: 1.0 Vp-p negative, C: 286 mVp-p (burst level)

Input/output  
INTERFACE:  
Pro 76-pin DIGITAL, Pro 50-pin  
VIDEO OUT:  
BNC  
LENS:  
12-pin

VF:  
20-pin

MONITOR OUT:  
BNC type

REMOTE:  
10-pin

MIC IN:  
XLR 3-pin

Power requirements:  
DC 12 V (10.5 to 17 V)

Power consumption:  
14 W

Operating temperature:  
-10°C to 45°C (14°F to 113°F)

Operating humidity:  
Less than 85%

Storage humidity:  
Less than 90%

Mass (camera head only):  
2.2 kg (4 lb 13 oz)

Eco Info:  
Lead-free solder is used for soldering certain parts.  
Halogenated flame retardants are not used in cabinets.

Production Cameras



## Production Cameras

# DXC-D50WSPL 3-chip CCD Portable Color Camera

### Features

●Can be docked with the DSR-1 DVCAM Recorder or PVV-3 Betacam SP Recorder ●Compact and lightweight: 2.2 kg (4 lb 13 oz) for camera head only ●Three 2/3-inch type Power HAD CCDs offer low smear level characteristics, high sensitivity and high S/N ratio (63 dB), and high horizontal resolution (850 TV lines/4:3 mode, 800 TV lines/16:9 mode) ●16:9 and 4:3 Switchable ●16:9 ID Pulse ●Hyper Gain (36 dB) ●12-bit AD converter and DSP (Digital Signal Processing) ●Knee Saturation process for faithful color reproduction even highlight area ●Adaptive Highlight Control realize optimum contrast balance ●Skin-Tone Detail function with auto detection of active area ●Horizontal Detail Frequency Control ●Low Key Saturation function ●Cross-Color Suppression ●Black halo-free ●Total Level Control System (TLCS) for extended range of Iris control ●Auto Tracing White Balance (ATW) function ●EZ Mode and EZ Focus for quick camera setup ●Scene File Operation by RCP-D50/D51 ●File Operation Using Sony Memory Stick ●Clear Scan (CLS) Function



Lens and CA are optional.

### Supplied Accessories

Camera head (1)  
 Camera handle (1)  
 Operating instructions (1)  
 Chart for flange focal (1)  
 Lens mount cap (1)  
 Wind screen (1)  
 External Microphone (1)  
 DXF-801 Viewfinder (1)  
 VCT-U14 Tripod Adaptor (1)

### Optional Accessories

CA-D50 Camera Adaptor  
 CA-TX50P Camera Adaptor  
 CA-TX7P Camera Adaptor  
 DSR-1P Dockable Recorder  
 PVV-3P Betacam SP 2000PRO Dockable Recorder  
 CCU-D50P Camera Control Unit  
 CCU-TX50P Camera Control Unit  
 CCU-TX7P Camera Control Unit  
 COU-TX7 Camera Operational Unit  
 DXBK-701 SDI Output Board  
 RCP-D50 Remote Control Panel (Joystick Type)  
 RCP-D51 Remote Control Panel (Dial Control Type)  
 RM-M7G Remote Control Unit  
 AC-DN10 AC Adaptor/Charger  
 CMA-8ACE AC Adaptor  
 ECM-678 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (U)  
 ECM-670 Electret Condenser Microphone (E)  
 EC-0.3C2 Microphone cable  
 CAC-12 Camera Microphone Holder  
 DXF-51 5-inch Monochrome Viewfinder  
 DR-100 Intercommunication Headset  
 CCZ-A Cables 26-pin/26-pin Cable  
 LC-421 Carrying Case  
 LCR-1 Camera Rain Cover  
 WRT-847A UHF Synthesized Transmitter Unit (AU)  
 WRT-847B UHF Synthesized Transmitter Unit (21CE7)

WRT-847B UHF Synthesized Transmitter Unit (33CE7)  
 WRT-847B UHF Synthesized Transmitter Unit (62CE7)  
 WRT-847B UHF Synthesized Transmitter Unit (67CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (62CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (AU)  
 WRT-822A UHF Synthesized Wireless Transmitter (69CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (21CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (33CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (62CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (67CE7)  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

# Production Cameras

## Specifications

Image device:  
3-chip 2/3-inch type IT CCD

A/D conversion:  
12 bits

Optics:  
F1.4 medium index prism system

Effective picture elements (H x V):  
980 x 586

Total picture elements (H x V):  
1038 x 1188

Sensing area:  
9.6 mm x 5.4 mm

Built-in filters:  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Electronic filter:  
5600K (on/off)

Lens mount:  
Sony 2/3-inch Bayonet mount

Signal system:  
PAL color system

Scanning system:  
2:1 interlaced, 625 lines, 50 fields/s

Horizontal frequency:  
15.625 kHz

Vertical frequency:  
50 Hz

Sync system:  
Internal or external with VBS or BS signal

Horizontal resolution:  
850 TV lines (4:3 mode), 800 TV lines (16:9 mode)

Vertical resolution:  
480 TV lines (without EVS), 530 TV lines (with EVS)

Minimum illumination:  
0.5 lx with F1.4, Hyper Gain (36 dB)  
0.8 lx with F1.8, Hyper Gain (36 dB)

Sensitivity:  
F11 at 2000 lx (3200 K, 89.9% reflectance) (typical)

Gain selection:  
-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB

Shutter speed selection:  
OFF, 1/60, 1/250, 1/500, 1/1000, 1/2000 s

Clear scan selection:  
50.2 to 6000 Hz

Signal-to-noise ratio:  
63 dB (typical)

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level

Power requirements:  
DC 12 V

Video output:  
Camera head BNC connector  
VBS: 1.0 Vp-p, sync negative  
26-pin connector of CA-D50  
VBS: 1.0 Vp-p, sync negative  
Y/R-Y/B-Y: Y: 1.0 Vp-p negative,  
R-Y/B-Y: 525 mVp-p  
RGB: 1.4 Vp-p  
Y/C: Y: 1.0 Vp-p negative, C: 300 mVp-p (burst level)

Input/output  
INTERFACE:  
Pro 76-pin DIGITAL, Pro 50-pin  
VIDEO OUT:  
BNC  
LENS:  
12-pin

VF:  
20-pin

MONITOR OUT:  
BNC type

REMOTE:  
10-pin

MIC IN:  
XLR 3-pin

Power requirements:  
DC 12 V (10.5 to 17 V)

Power consumption:  
14 W

Operating temperature:  
-10°C to 45°C (14°F to 113°F)

Operating humidity:  
Less than 85%

Storage humidity:  
Less than 90%

Mass (camera head only):  
2.2 kg (4 lb 13 oz)

Eco Info:  
Lead-free solder is used for soldering certain parts.  
Halogenated flame retardants are not used in cabinets.

Production Cameras



## Production Cameras

# OHB-750AP Integrated Imaging Capsule

### Features

- Furnished with a 4:3 standard image format Power HAD 1000 FIT CCD chips for the BVP-900P and the BVP-950P

#### Applicable Models

BVP-900P 3-chip CCD Studio/OB Camera  
System  
BVP-950P 3-chip CCD Studio/OB Camera

#### Specifications

##### Pickup device system

Device configuration:  
3-chip 2/3-inch type FIT CCD

Aspect ratio:  
4:3 standard

Picture elements:  
1038 (H) x 594 (V)

##### Optical specifications

Specuram system:  
F1.4 prism system

Servo control:  
Yes

Color filter-A:  
Cross

Color filter-B:  
3200K

Color filter-C:  
4300K

Color filter-D:  
6300K

Color filter-E:  
8000K

ND filter-1:

Clear

ND filter-2:

1/4 ND

ND filter-3:

1/8 ND

ND filter-4:

1/16 ND

ND filter-5:

1/64 ND

##### Electrical characteristic

Sensitivity:

F8.0 at 2000 lx  
(3200K 89.9% reflectance)

Minimum subject illumination:  
7.8 lx (F1.4, +18 dB gain)

Signal-to-noise ratio:  
63 dB

Horizontal resolution:  
900 TV lines

Vertical resolution:  
480 TV lines (530TV lines with EVS or  
Super EVS)

Geometric distortion:  
Below measurable level (without lens)

Shutter speed selection:  
1/60, 1/250, 1/500, 1/1000, 1/2000 s

Gain selection:

-3 dB, 0 dB, +3 dB, +6 dB, +9 dB, +12  
dB, +18 dB

Clear scan selection:  
25.4 to 9000 Hz

Modulation depth at 5 MHz:  
80% (typical)

Power consumption:  
20 W

Power requirements:  
DC 10.5 to 17 V

##### General

Operating temperature:  
-20 to +45°C (-4 to +113°F)

Storage temperature:  
-20 to +50°C (-4 to +122°F)

# OHB-750WSA Integrated Imaging Capsule

### Features

- Furnished with a true 16:9 widescreen image format Power HAD 1000 FIT CCD chips for the BVP-900 and the BVP-950

#### Applicable Models

BVP-900 3-chip CCD Studio/OB Camera  
System  
BVP-950 3-chip CCD Studio/OB Camera

#### Specifications

##### Pickup device system

Device configuration:  
3-chip 2/3-inch type FIT CCD

Aspect ratio:  
16:9/4:3 switchable

Picture elements:  
1038 (H) x 504 (V)

##### Optical specifications

Specuram system:  
F1.4 prism system

Servo control:  
Yes

Color filter-A:  
Cross

Color filter-B:  
3200K

Color filter-C:  
4300K

Color filter-D:  
6300K

Color filter-E:  
8000K

ND filter-1:

Clear

ND filter-2:

1/4 ND

ND filter-3:

1/8 ND

ND filter-4:

1/16 ND

ND filter-5:

1/64 ND

##### Electrical characteristic

Sensitivity:

F10.0 at 2000 lx  
(3200K 89.9% reflectance)

Minimum subject illumination:  
5.0 lx (F1.4, +18 dB gain)

Signal-to-noise ratio:  
65 dB

Horizontal resolution:  
900 TV lines

Vertical resolution:  
400 TV lines (450TV lines with EVS or  
Super EVS)

Geometric distortion:  
Below measurable level (without lens)

Shutter speed selection:  
1/100, 1/250, 1/500, 1/1000, 1/2000 s

Gain selection:

-3 dB, 0 dB, +3 dB, +6 dB, +9 dB, +12  
dB, +18 dB

Clear scan selection:  
30.4 to 7000 Hz

Modulation depth at 5 MHz:  
80% (typical)

Power consumption:  
20 W

Power requirements:  
DC 10.5 to 17 V

##### General

Operating temperature:  
-20 to +45°C (-4 to +113°F)

Storage temperature:  
-20 to +50°C (-4 to +122°F)

Production Cameras

OHB-750WSAP Integrated Imaging Capsule

Features

●Furnished with a true 16:9 widescreen image format  
Power HAD 1000 FIT CCD chips for the BVP-900P and the BVP-950P

Applicable Models

BVP-900P 3-chip CCD Studio/OB Camera  
System  
BVP-950P 3-chip CCD Studio/OB Camera

Specifications

Pickup device system

Device configuration:  
3-chip 2/3-inch type FIT CCD

Aspect ratio:  
16:9/4:3 switchable

Picture elements:  
1038 (H) x 594 (V)

Optical specifications

Securam system:  
F1.4 prism system

Servo control:  
Yes

Color filter-A:  
Cross

Color filter-B:  
3200K

Color filter-C:  
4300K

Color filter-D:  
6300K

Color filter-E:  
8000K

ND filter-1:

Clear

ND filter-2:

1/4 ND

ND filter-3:

1/8 ND

ND filter-4:

1/16 ND

ND filter-5:

1/64 ND

Electrical characteristic

Sensitivity:

F9.0 at 2000 lx  
(3200K 89.9% reflectance)

Minimum subject illumination:

6.2 lx (F1.4, +18 dB gain)

Signal-to-noise ratio:

63 dB

Horizontal resolution:

900 TV lines

Vertical resolution:

480 TV lines (530TV lines with EVS or Super EVS)

Geometric distortion:

Below measurable level (without lens)

Shutter speed selection:

1/60, 1/250, 1/500, 1/1000, 1/2000 s

Gain selection:

-3 dB, 0 dB, +3 dB, +6 dB, +9 dB, +12 dB, +18 dB

Clear scan selection:

25.4 to 9000 Hz

Modulation depth at 5 MHz:

80% (typical)

Power consumption:

20 W

Power requirements:

DC 10.5 to 17 V

General

Operating temperature:

-20 to +45°C (-4 to +113°F)

Storage temperature:

-20 to +50°C (-4 to +122°F)

Production Cameras

Production Cameras



Production Cameras

Sensor Cameras

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Sensor Cameras

## Sensor Cameras

### BRC-300 3-CCD Color Video Camera

#### Features

●1/4.7-type IT Mega Pixels 3-CCD with Advanced HAD technology\*Unique-all-in-one design - Combines camera, lens & pan/tilt mount\*48x zoom capability\*Minimum illumination - 7 lx at F1.6\*Horizontal resolution 600 TV lines\*High performance Pan/Tilt/Zoom mechanism\*4:3/16:9 aspect selectable (16:9 precision technology)\*Image flip function - Allows for desk top or ceiling mount installation\*Optional interface card slot - RGB, SDI, and Fiber\*Optional easy-to-use and ergonomic designed RemoteControl Unit - Remotely control via RS-232C and RS-422 (VISCA protocol)\* Optional Optical Multiplex Unit - Allows for long-distance operation using fiber cable

#### Supplied Accessories

AC adaptor (1)  
IR remote commander (1)  
Terminal connector (1)  
AC adaptor cable (1)  
Ceiling bracket (2)  
Operating instructions (1)

#### Optional Accessories

BRBK-304 DV Card  
BRBK-301 Analog/RGB Component Card  
BRBK-302 SDI Card  
BRBK-303 Optical Multiplex Card  
RM-BR300 Remote Control Unit  
BRU-300 Optical Multiplex Unit  
CCFC-M100 Optical Fiber Cable  
CCXC-9DBS Cable 9-pin/5BNCs Cable  
VCL-HG0737X Wide Conversion Lens  
CCMC-9DS Cable 9-pin/4BNCs, DIN 4-pin



Sensor Cameras

Specifications

Image device:  
Three 1/4.7 type IT Advanced HAD CCD (x3),  
1070000pixels (gross)

CCD effective pixels

4:3 mode:  
960 (H) x 720 (V)

16:9 mode:  
1,152 (H) x 648 (V)

Effective pixels

NTSC:  
768 (H) x 494 (V)

PAL:  
752 (H) x 582 (V)

Signal systems:  
NTSC/PAL

Horizontal resolution:  
600 TV lines(4:3 mode)

Sync systems:  
Internal/External

Lens:  
12x optical zoom, 48x with digital zoom

Focal length:  
f = 3.6 to 43.2 mm (F1.6 to F2.8)

Horizontal viewing angle

4:3 mode:  
3.3 (Tele end) to 37.8 degrees (Wide end)

16:9 mode:  
4.0 (Tele end) to 45.4 degrees (Wide end)

Minimum object distance:  
300 mm (Wide end), 800 mm (Tele end)

Pan/Tilt angle:  
-170 to +170 degrees (Pan), -30 to +90  
degrees (Tilt)

Pan/Tilt speed:  
0.25 to 60 degrees/s (Pan/Tilt)

Minimum illumination:  
7 lx at F1.6

S/N ratio:  
50 dB

Shutter speed

NTSC:  
1/10000 to 1/4 s

PAL:  
1/10000 to 1/3 s

Gain:  
Auto/Manual (-3 to 18 dB, 3 dB steps)  
switchable

White balance:  
Auto, Indoor, Outdoor, One-push WB, Manual

Preset positioning:  
6 positions

Analog output:  
VBS (BNC), Y/C (4-pin Mini DIN)

Camera control interface:  
RS-232C (VISCA protocol) / RS-422 (VISCA  
protocol)

Back-light compensation:  
On / Off

Operating temperature:  
0 to 40 degrees (32 to 104 °F)

Storage temperature:  
-20 to 60 degrees (-4 to 140 °F)

Power requirement:  
DC 12 V

Power consumption:  
21.6 W (without optional card)

Dimensions (W x H x D):  
180 x 210.1 x 205 mm (7 1/8 x 8 3/8 x 8 1/8 x  
inches) (without projection ports)

Mass:  
2.7 kg (5 lb 15 oz)

## Sensor Cameras

### DXC-390 3-CCD Color Video Camera

#### Features

●1/3 type IT 3CCDs\*C mount\*Exwave HAD technology provides excellent sensitivity and low smear levels\*Superior picture quality: High resolution of 800 TV lines and S/N ratio of 62 dB\*High Sensitivity of F8 at 2000 lux\*Scene Files and User Files\*Powerful picture contrast controls: DynaLatitude, DCC+ and Black Stretch\*Several enhance controls: Detail, Linear Matrix and Partial Enhance\*Wide selection of Automatic Exposure (AE) modes\*Hyper Gain\*RGB, Y/C and composite video outputs\*Full control of functions from the side panel or the optional RM-C950 Remote Control Unit



#### Supplied Accessories

Lens cap (1)  
Tripod adaptor (1)  
Operation manual (1)  
Panel sheet for RM-C950 (1)

#### Optional Accessories

RM-C950 Remote Control Unit  
VCL-610WEA Motorised remote control lens  
f=6.5 to 65 mm (x10)  
VCL-614WEA Remote/manual macro lens  
f=5.5 to 77 mm (x14)  
VCL-616WEA 1/3 Type C-mount Lens  
VCL-08WM C mount lens (f=8 mm for 3-CCD camera)  
VCL-16WM C mount lens (f=16 mm for 3-CCD camera)  
VCL-25WM C mount lens (f=25 mm for 3-CCD camera)  
CMA-D2 Camera Adaptor  
CMA-D3 Camera Adaptor  
DKR-700 Digital Still Recorder  
MVA-15 Microscope adaptor  
MVAC-33-SM Coupler  
MVAC-33-N Coupler  
MVAC-33-O Coupler  
CCDC Cables 12-pin/4-pin DC Cables  
CCMC-12 Cables 12-pin/12-pin Multi Core Cables  
CCXC-9DBS Cable 9-pin/5BNCs Cable  
CCMC-9DS Cable 9-pin/4BNCs, DIN 4-pin  
CCZ-A Cables 26-pin/26-pin Cable

## Sensor Cameras

### Specifications

Image device:  
1/3 type IT (Interline Transfer) CCD (x3)

Effective picture elements:  
768 (H) × 494 (V)

Sensing area:  
6.00 (H) × 4.96 (V) mm

Scanning system:  
2:1 interlaced, 525 lines

Horizontal frequency:  
15.734 kHz

Vertical frequency:  
60 Hz

Sync system:  
Internal or External with VBS, HD/VD  
(Automatic Switching)

Phase control:  
H/SC phase control

Horizontal resolution:  
800 TV lines

Lens mount:  
C mount

Flange back:  
17.526 mm in air

Sensitivity:  
F8.0 at 2000 lux

Minimum illumination:  
4 lx (F2, GAIN: HYPER)

S/N ratio:  
62 dB

Gain  
STEP/AGC/HYPER selectable  
STEP: 0 to 24 dB by 1 dB step  
AGC: 0 to 24 dB (Limit value: 6 dB, 12 dB, 18 dB, 24 dB variable)  
HYPER: 30 dB

Electronic shutter  
OFF/STEP/VARIABLE/CCD IRIS selectable  
OFF: 1/60 s  
STEP: OFF (1/60 s), F.L. (PAL: 1/100 s),  
1/125, 1/250, 1/500, 1/1000, 1/2000,  
1/4000, 1/10000, 1/20000, 1/40000,  
1/100000, 0.1, 0.2, 0.3, 0.5, 1.0, 1.5,  
2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0, 7.0, 8.0 s  
VARIABLE: in high-speed mode 260/525  
to 1/525H, OFF in low-speed mode 255  
to 1 frames for field mode 256 to 2  
frames for frame mode  
CCD IRIS: 1/60 to 1/100000 s (Limit  
value: 1/500, 1/1000, 1/2000, 1/4000,  
1/10000, 1/20000, 1/40000, 1/100000 s  
variable)

Lens:  
Remote (Auto or Manual)/Video selectable

AE area:  
Multi/Large/Medium/Spot/Slit/Manual  
selectable

AE level:  
Variable

AE speed:  
Fast/Mid/Slow selectable

AE detect:  
Average/Peak selectable

Contrast Effect:  
Manual/DynaLatitude/DCC+ selectable

Knee point:  
High/Normal/Low selectable (Contrast  
Effect: Manual)

Black stretch:  
Variable (Contrast Effect: Manual)

Gamma:  
ON/OFF Variable

Pedestal:  
Master and R/B Manual adjustable

Black balance:  
ABB

White balance:  
AWB/ATW NORMAL/ATW  
WIDE/MANUAL/3200K/5600K selectable  
AWB or ATW R/B Paint, MANUAL R/B Gain

ATW area:  
NORMAL/MANU selectable

ATW speed:  
FAST/NORMAL/SLOW selectable

Detail level:  
ON/OFF (Variable at ON)

Detail Frequency:  
HIGH/MID/LOW selectable

Linear matrix:  
ON/OFF

Linear matrix MODE:  
STANDARD/R Enhance/G Enhance/B  
Enhance/Manual selectable

Partial Enhance:  
ALL/IN/OUT selectable

CCD integration mode:  
FIELD/FRAME selectable

Shading Compensation:  
OFF/ON (Manual control)

Trigger Polarity:  
Positive edge trigger/Negative edge trigger  
selectable

Baud rate:  
19200/9600/4800/2400/1200 selectable

Sync:  
RGB/G/OFF selectable

Strobe:  
ON/OFF

User File:  
A/B switchable (Two pattern memories)

Scene File:  
STANDARD/MICROSCOPE/FULL  
AUTO/STROBE/FILE A or B

Output signal  
VBS:  
1.0 Vp-p, 75 Ω, sync negative

RGB:  
0.7 Vp-p, 75 Ω, Sync ON/OFF possible

SYNC:  
2 Vp-p, 75 Ω

Y:  
1.0 Vp-p, 75 Ω

C:  
0.3 Vp-p, 75 Ω, without sync

Operating temperature:  
-5 to 45°C

Storage temperature:  
-20 to 60°C

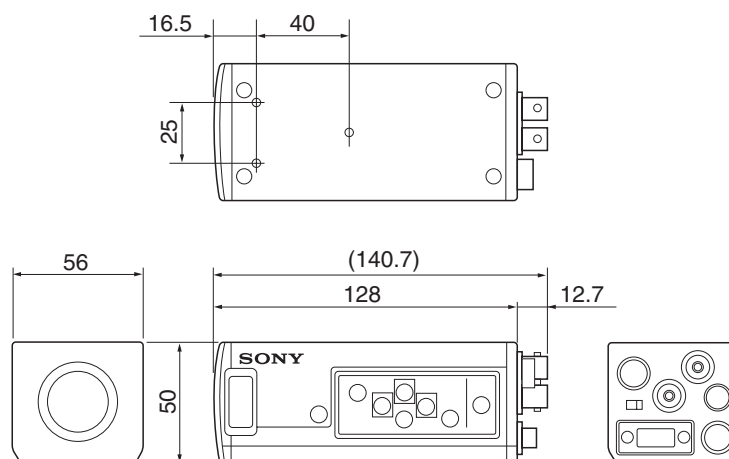
Power requirements:  
DC 10.5 to 15.0 V

Power consumption:  
Approx. 7.6 W

Mass:  
Approx. 370 g

Connectors:  
Lens (6-pin)  
RGB/SYNC (9-pin D-sub)  
DC IN/VBS (12-pin)  
VIDEO OUT (BNC)  
TRIGGER IN (BNC)  
REMOTE (8-pin mini DIN)

Sensor Cameras



## Sensor Cameras

### DXC-390P 3-CCD Color Video Camera

#### Features

●1/3 type IT 3CCDs\*C mount\*Exwave HAD technology provides excellent sensitivity and low smear levels\*Superior picture quality: High resolution of 800 TV lines and S/N ratio of 61 dB\*High Sensitivity of F8 at 2000 lux\*Scene Files and User Files\*Powerful picture contrast controls: DynaLatitude, DCC+ and Black Stretch\*Several enhance controls: Detail, Linear Matrix and Partial Enhance\*Wide selection of Automatic Exposure (AE) modes\*Hyper Gain\*RGB, Y/C and composite video outputs\*Full control of functions from the side panel or the optional RM-C950 Remote Control Unit



#### Supplied Accessories

Lens cap (1)  
Tripod adaptor (1)  
Operation manual (1)  
Panel sheet for RM-C950 (1)

#### Optional Accessories

VCL-610WEA Motorised remote control lens  
f=6.5 to 65 mm (x10)  
VCL-614WEA Remote/manual macro lens  
f=5.5 to 77 mm (x14)  
VCL-616WEA 1/3 Type C-mount Lens  
VCL-08WM C mount lens (f=8 mm for 3-CCD camera)  
VCL-16WM C mount lens (f=16 mm for 3-CCD camera)  
VCL-25WM C mount lens (f=25 mm for 3-CCD camera)  
RM-C950 Remote Control Unit  
CMA-D2CE Camera Adaptor  
CMA-D3CE Camera Adaptor  
DKR-700P Digital Still Recorder  
MVA-15 Microscope adaptor  
MVAC-33-SM Coupler  
MVAC-33-N Coupler  
MVAC-33-O Coupler  
CCDC Cables 12-pin/4-pin DC Cables  
CCMC-12 Cables 12-pin/12-pin Multi Core Cables  
CCXC-9DBS Cable 9-pin/5BNCs Cable  
CCMC-9DS Cable 9-pin/4BNCs, DIN 4-pin  
CCZ-A Cables 26-pin/26-pin Cable

## Sensor Cameras

### Specifications

Image device:  
1/3 type IT (Interline Transfer) CCD (x3)

Effective picture elements:  
752 (H) × 582 (V)

Sensing area:  
6.00 (H) × 4.96 (V) mm

Scanning system:  
2:1 interlaced, 625 lines

Horizontal frequency:  
15.625 kHz

Vertical frequency:  
50 Hz

Sync system:  
Internal or External with VBS,  
HD/VD(Automatic Switching)

Phase control:  
H/SC phase control

Horizontal resolution:  
800TV lines

Lens mount:  
C mount

Flange back:  
17.526 mm in air

Sensitivity:  
F8.0 at 2000 lux

Minimum illumination  
4 lux (F2, GAIN:HYPER)

S/N ratio:  
61 dB

Gain  
STEP/AGC/HYPER selectable  
STEP: 0 to 24 dB by 1 dB step  
AGC: 0 to 24 dB (Limit value: 6 dB, 12 dB, 18 dB, 24 dB variable)  
HYPER: 30 dB

Electronic shutter  
OFF/STEP/VARIABLE/CCD IRIS selectable  
OFF: 1/50 s  
STEP: OFF (PAL:1/50 s), F.L.(PAL:1/120 s), 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/20000, 1/40000, 1/100000, 0.1, 0.2, 0.3, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0, 7.0, 8.0 s  
VARIABLE: in high-speed mode 310/625 to 1/625H, OFF in low-speed mode 255 to 1 frames for field mode 256 to 2 frames for frame mode  
CCD IRIS: 1/60 to 1/100,000 s (Limit value: 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/20,000, 1/40,000, 1/100,000 s variable)

Lens:  
Remote (Auto or Manual)/Video selectable

AE area:  
Multi/Large/Medium/Spot/Slit/Manual selectable

AE level:  
Variable

AE speed:  
Fast/Mid/Slow selectable

AE detect:  
Average/Peak selectable

Contrast Effect:  
Manual/DynaLatitude/DCC+ selectable

Knee Point:  
High/Normal/Low selectable(Contrast Effect: Manual)

Black stretch:  
Variable (Contrast Effect: Manual)

Gamma:  
ON/OFF Variable

Pedestal:  
Master and R/B Manual adjustable

Black balance:  
ABB

White balance:  
AWB/ATW NORMAL/ATW  
WIDE/MANUAL/3200K/5600K selectable  
AWB or ATW R/B Paint, MANUAL R/B Gain

ATW area:  
NORMAL/MANU selectable

ATW speed:  
FAST/NORMAL/SLOW selectable

Detail level:  
ON/OFF (Variable at ON)

Detail Frequency:  
HIGH/MID/LOW selectable

Linear matrix:  
ON/OFF

Linear matrix MODE:  
STANDARD/R Enhance/G Enhance/B Enhance/Manual selectable

Partial Enhance:  
ALL/IN/OUT selectable

CCD integration mode:  
FIELD/FRAME selectable

Shading Compensation:  
OFF/ON (Manual control)

Trigger Polarity:  
Positive edge trigger /Negative edge trigger selectable

Baud rate:  
19200/9600/4800/2400/1200 selectable

Sync:  
RGB/G/OFF selectable

Strobe:  
ON/OFF

User File:  
A/B switchable (Two pattern memories)

Scene File:  
STANDARD/MICROSCOPE/FULL  
AUTO/STROBE/FILE A or B

Output signal  
VBS:  
1.0 Vp-p, 75 Ω, sync negative

RGB:  
0.7 Vp-p, 75 Ω, Sync ON/OFF possible

SYNC:  
2 Vp-p, 75 Ω

Y:  
1.0 Vp-p, 75 Ω

C:  
0.3 Vp-p, 75 Ω, without sync

Operating temperature:  
-5 to 45°C

Storage temperature:  
-20 to 60°C

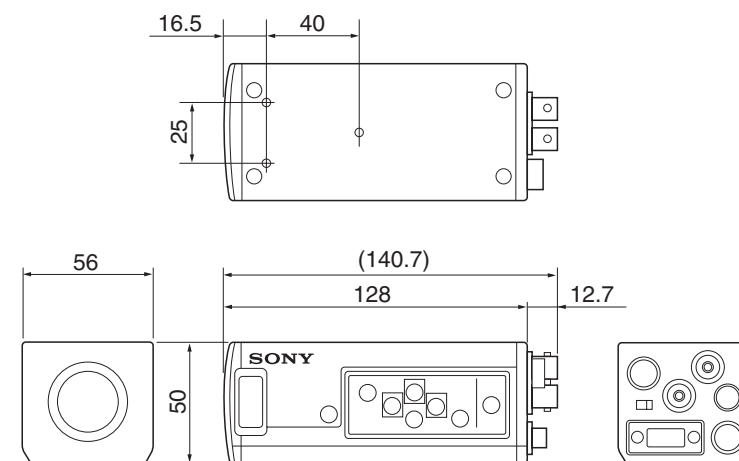
Power requirements:  
DC 10.5 to 15.0 V

Power consumption:  
Approx. 7.6 W

Dimensions:  
56 (W) × 50 (H) × 128 (D) mm  
(Excluding projecting parts)

Weight:  
Approx. 370 g

Connectors:  
Lens (6-pin)  
RGB/SYNC (9-pin D-sub)  
DC IN/VBS (12-pin)  
VIDEO OUT (BNC)  
TRIGGER IN (BNC)  
REMOTE (8-pin mini DIN)



## Sensor Cameras

### DXC-990 3-CCD Color Video Camera

The DXC-990 is a 1/2 type 3-CCD color video camera featuring a new DSP technology as well as Exwave HAD technology for excellent sensitivity (F11 @2000 lux) and low vertical smear. Using a bayonet mount lens and providing a resolution of 850 TV lines and high S/N ratio (63 dB), the DXC-990 is ideal for applications such as semiconductor inspection, printing inspection and microscopy, where picture accuracy and detail are important. All functions are easily controlled from the camera's rear panel with an optional RM-C950 Remote Control Unit or an external computer via an RS-232C interface. Multiple component, RGB, Y/C and composite video signal outputs allow the DXC-990 to be integrated into virtually any industrial video system. Optional adapters and couplers are available for mounting onto various types of microscopes.

#### Features

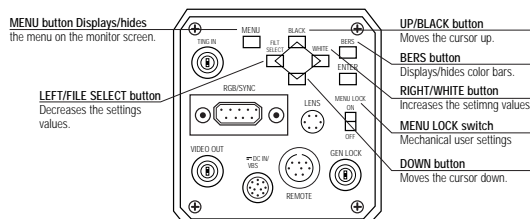
- New Digital Signal Processing (DSP) technology for powerful picture contrast controls\*Partial Enhance\*DynaLatitude\*DCC+\*High Sensitivity (F11 @2000 lux)\*Y/C, RGB, Y/R-Y/B-Y, and composite video signal outputs\*Linear matrix, shading compensation, master pedestal and gamma selection\*Flash synchronization function\*Full color genlock\*CCD iris and adjustable window Auto Exposure\*Fixed, One-push, Manual and Automatic White Balance\*Color shading matrix and painting connections\*Two set up memories\*Color bar generator\*Cable extension up to 100 m with CMA-D3 adaptor

#### Supplied Accessories

Lens mount cap (1)  
Stopper mount (1)  
Operation manual (1)  
Panel sheet for RM-950 (1)

#### Optional Accessories

RM-C950 Remote Control Unit  
CMA-D2 Camera Adaptor  
CMA-D2MD Camera Adaptor  
CMA-D3 Camera Adaptor  
CCMC-12 Cables 12-pin/12-pin Multi Core Cables  
CCDC Cables 12-pin/4-pin DC Cables  
CCDC-A Cables 12-pin/4-pin Cable  
CCXC-9DD Cable 9-pin/9-pin Cable  
CCXC-9DBS Cable 9-pin/5BNCs Cable  
CCMC-9DS Cable 9-pin/4BNCs, DIN 4-pin  
CCMC-3MZ Cable  
LO-32BMT 2/3-inch Lens Mount Adaptor  
VCL-714BXEA Adaptable Zoom Lens  
VCL-717BXEA Adaptable Zoom Lens  
VCL-0716BXA 1/2 Type Bayonet Mount Lens

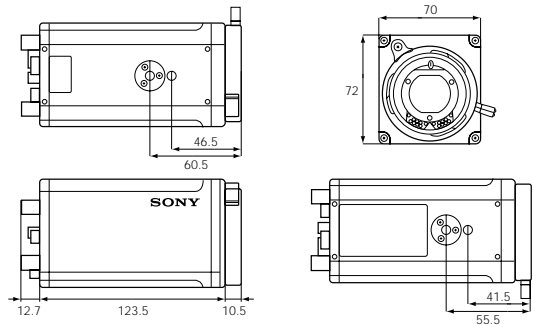


Sensor Cameras

Specifications

Pick-up device:  
1/2 type IT (Interline Transfer) Exwave CCD  
(x3)  
Effective picture elements:  
768 (H) x 494 (V)  
Sensing area:  
6.4 x 4.8 mm  
Horizontal frequency:  
15.734 kHz  
Vertical frequency:  
59.94 Hz  
Sync sytem:  
Internal or external with VBS, HD/VD  
Horizontal resolution:  
850 TV lines  
Sensitivity:  
F11 (2000 lux)  
Minumum illumination:  
1 lux (F1.4, GAIN: HYPER)  
S/N ratio:  
63 dB  
Gain:  
STEP/AGC (0 to 24 dB)/HYPER  
Shutter speed:  
0.5 to 1/100,000 s  
Lens mount:  
Bayonet mount  
AE area:  
Multi/Large/Medium/Spot/Slit/Manual  
AE level:  
Variable  
AE speed:  
Fast/Mid/Slow selectable  
AE detect:  
Average/Peak selectable  
Contrast effect:  
Manual/DynaLatitude/DCC+ selectable  
Knee point:  
High/Normal/Low selectable  
Black stretch:  
Variable  
Gamma:  
On/Off  
Pedestal:  
Master, R/B manual adjustable  
Black balance:  
ABB  
White balance:  
AWB/ATW normal/ATW wide/Manual/3200  
K/5600 K selectable  
AWB or ATW R/B paint, manual R/G gain  
ATW area:  
Normal/Manual  
ATW speed:  
Slow/Mid/Fast  
Detail level:  
On (Variable)/Off  
Detail frequency:  
High/Mide/Low  
Linear matrix:  
On/Off  
Linear matrix code:  
STANDARD/R Enhance/G Enhance/B  
Enhance/Manual selectable  
Partial enhance:  
All/In/Out  
CCD integration mode:  
Field/Frame  
Shading compensation:  
On/Off (manual)  
Trigger polarity:  
Positive edge trigger/Negative edge  
trigger selectable

Baud rate:  
19200/9600/4800/2400/1200  
Sync:  
RGB/G/OFF  
Trigger:  
On/Off  
User file:  
A/B  
Scene file:  
Standard/Microscope/Full Auto/Strobe/File  
A or B  
Output signals:  
VBS, RGB/SYNC, Y/C, Y/R-Y/B-Y  
Serial data:  
RS-232C  
Operational temperature:  
-5 to 45°C (23 to 113°F)  
Storage temperature:  
-20 to 60°C (-4 to 140°F)  
Power requirements:  
DC 10.5 to 15.0 V  
Power consumption:  
Approx. 8.0 W  
Dimensions:  
70 x 72 x 123.5 mm (2 7/8 x 2 7/8 x 4 7/8  
inches)  
Mass:  
630 g (1 lb 6 oz)  
Connectors:  
RGB/SYNC (9-pin D-sub), DC IN/VBS  
(12-pin), VIDEO OUT (BNC), TRIGGER IN  
(BNC), REMOTE (8-pin mini DIN), GEN  
LOCK IN (BNC), LENS (6-pin)



## Sensor Cameras

### DXC-990P 3-CCD Color Video Camera

The DXC-990P is a 1/2 type 3-CCD color video camera featuring a new DSP technology as well as Exwave HAD technology for excellent sensitivity (F11 @2000 lux) and low vertical smear. Using a bayonet mount lens and providing a resolution of 850 TV lines and high S/N ratio (62 dB), the DXC-990P is ideal for applications such as semiconductor inspection, printing inspection and microscopy, where picture accuracy and detail are important. All functions are easily controlled from the camera's rear panel with an optional RM-C950 Remote Control Unit or an external computer via an RS-232C interface. Multiple component, RGB, Y/C and composite video signal outputs allow the DXC-990P to be integrated into virtually any industrial video system. Optional adapters and couplers are available for mounting onto various types of microscopes.

#### Features

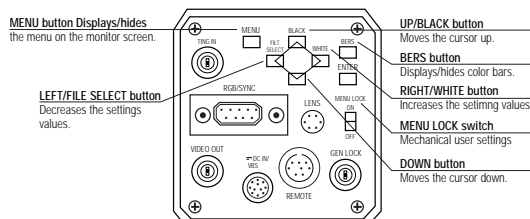
- New Digital Signal Processing (DSP) technology for powerful picture contrast controls\*Partial Enhance\*DynaLatitude\*DCC+\*High Sensitivity (F11 @2000 lux)\*Y/C, RGB, Y/R-Y/B-Y, and composite video signal outputs\*Linear matrix, shading compensation, master pedestal and gamma selection\*Flash synchronization function\*Full color genlock\*CCD iris and adjustable window Auto Exposure\*Fixed, One-push, Manual and Automatic White Balance\*Color shading matrix and painting connections\*Two set up memories\*Color bar generator\*Cable extension up to 100 m with CMA-D3 adaptor

#### Supplied Accessories

Lens mount cap (1)  
Stopper mount (1)  
Operation manual (1)  
Panel sheet for RM-950 (1)

#### Optional Accessories

CMA-D2CE Camera Adaptor  
CMA-D2MDCE Camera Adaptor  
CMA-D3CE Camera Adaptor  
CCMC-12 Cables 12-pin/12-pin Multi Core Cables  
CCDC Cables 12-pin/4-pin DC Cables  
CCDC-A Cables 12-pin/4-pin Cable  
CCXC-9DD Cable 9-pin/9-pin Cable  
CCXC-9DBS Cable 9-pin/5BNCs Cable  
CCMC-9DS Cable 9-pin/4BNCs, DIN 4-pin  
CCMC-3MZ Cable  
RM-C950 Remote Control Unit  
LO-32BMT 2/3-inch Lens Mount Adaptor  
VCL-714BXEA Adaptable Zoom Lens  
VCL-717BXEA Adaptable Zoom Lens  
VCL-0716BXA 1/2 Type Bayonet Mount Lens

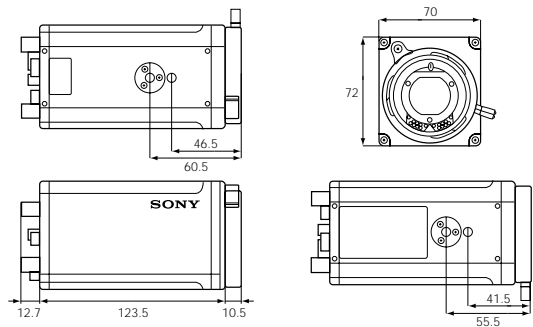


Sensor Cameras

Specifications

Image device:  
1/2 type IT (Interline Transfer) Exwave CCD  
(x3)  
Effective picture elements:  
752 (H) x 582 (V)  
Sensing area:  
6.4 x 4.8 mm  
Horizontal frequency:  
15.734 kHz  
Vertical frequency:  
59.94 Hz  
Sync sytem:  
Internal or external with VBS, HD/VD  
Horizontal resolution:  
850 TV lines  
Sensitivity:  
F11 (2000 lux)  
Minumum illumination:  
1 lux (F1.4, GAIN: HYPER)  
S/N ratio:  
62 dB  
Gain:  
STEP/AGC (0 to 24 dB)/HYPER  
Shutter speed:  
0.5 to 1/100,000 s  
Lens mount:  
Bayonet mount  
AE area:  
Multi/Large/Medium/Spot/Slit/Manual  
AE level:  
Variable  
AE speed:  
Fast/Mid/Slow selectable  
AE detect:  
Average/Peak selectable  
Contrast effect:  
Manual/DynaLatitude/DCC+ selectable  
Knee point:  
High/Normal/Low selectable  
Black stretch:  
Variable  
Gamma:  
On/Off  
Pedestal:  
Master, R/B manual adjustable  
Black balance:  
ABB  
White balance:  
AWB/ATW normal/ATW wide/Manual/3200  
K/5600 K selectable  
AWB or ATW R/B paint, manual R/G gain  
ATW area:  
Normal/Manual  
ATW speed:  
Slow/Mid/Fast  
Detail level:  
On (Variable)/Off  
Detail frequency:  
High/Mide/Low  
Linear matrix:  
On/Off  
Linear matrix code:  
STANDARD/R Enhance/G Enhance/B  
Enhance/Manual selectable  
Partial enhance:  
All/In/Out  
CCD integration mode:  
Field/Frame  
Shading compensation:  
On/Off (manual)  
Trigger polarity:  
Positive edge trigger/Negative edge  
trigger selectable

Baud rate:  
19200/9600/4800/2400/1200  
Sync:  
RGB/G/OFF  
Trigger:  
On/Off  
User file:  
A/B  
Scene file:  
Standard/Microscope/Full Auto/Strobe/File  
A or B  
Output signals:  
VBS, RGB/SYNC, Y/C, Y/R-Y/B-Y  
Serial data:  
RS-232C  
Operational temperature:  
-5 to 45°C (23 to 113°F)  
Storage temperature:  
-20 to 60°C (-4 to 140°F)  
Power requirements:  
DC 10.5 to 15.0 V  
Power consumption:  
Approx. 8.0 W  
Dimensions:  
70 x 72 x 123.5 mm (2 7/8 x 2 7/8 x 4 7/8  
inches)  
Mass:  
630 g (1 lb 6 oz)  
Connectors:  
RGB/SYNC (9-pin D-sub), DC IN/VBS  
(12-pin), VIDEO OUT (BNC), TRIGGER IN  
(BNC), REMOTE (8-pin mini DIN), GEN  
LOCK IN (BNC), LENS (6-pin)



## Sensor Cameras

### DXC-C33 3-CCD Color Video Camera

Ideal for use in space-limited locations, the DXC-C33 incorporates one of the smallest/lightest camera head unit featuring three 1/3 type CCDs. In spite of its compact (32 (W) x 38 (H) x 40 (D) mm, 1 5/16 x 1 1/2 x 1 5/8 inches) and lightweight (48 g, 1.7 oz) camera head unit, this model inherits superb picture quality of the DXC Series. Its horizontal resolution is 850 TV lines and the high sensitivity is 2000 lux at F8. Also, various features such as DynaLatitude, Partial Enhance are provided to this model. First for the DXC Series and also first for 3-CDD small head cameras, the DXC-C33 is equipped with a DV output terminal. Thanks to the DV output terminal, video signals can be recorded to i.LINK interface-equipped VTR with no quality deterioration. With the excellent features and medical approval, the DXC-C33 is the right choice for medical fields, and also for demanding applications such as research and industrial fields.



#### Features

●Small camera head\*High picture quality\*i.LINK DV out\*10-bit DSP\*DynaLatitude\*Frame memory\*Partial Enhance\*User-friendly control panel\*Two AE areas preset\*RS-232C interface\*External synchronization (HD/VD, VBS)

#### Supplied Accessories

Tripod adaptor (1)  
AC power cable (1)  
Lens cap (1)  
Panel sheet for RM-C950 (1)  
Operation manual (1)

#### Optional Accessories

VCL-08WM C mount lens (f=8 mm for 3-CCD camera)  
VCL-16WM C mount lens (f=16 mm for 3-CCD camera)  
VCL-25WM C mount lens (f=25 mm for 3-CCD camera)  
DSR-20MD DVCAM Recorder  
RM-C950 Remote Control Unit  
CCMC-20 Cables 20-pin/20-pin Cable  
VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
CCXC-9DB Cable 9-pin/9-pin Cable  
CCXC-9DD Cable 9-pin/9-pin Cable  
CCMC-9DS Cable 9-pin/4BNCs, DIN 4-pin

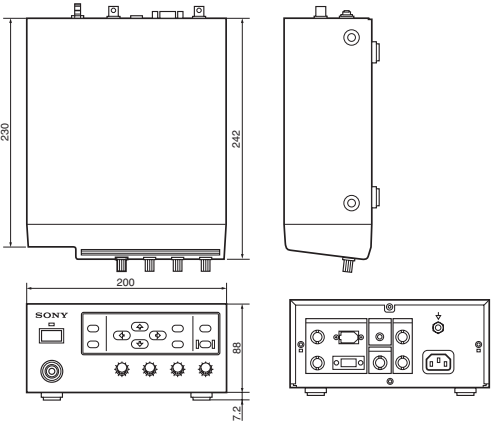
Sensor Cameras

Specifications

Image device:  
1/3 type IT (Interline Transfer) CCD (x3)  
Effective picture elements:  
768 (H) x 494 (V)  
Sensing area:  
4.8 (H) x 3.6 (V) mm  
Scanning system:  
2:1 interlaced, 525 lines  
Horizontal frequency:  
15.734 kHz  
Vertical frequency:  
59.94 Hz  
Sync system:  
Internal or external with VBS or HD/VD  
Phase control:  
H/SC phase control  
Horizontal resolution:  
850 TV lines  
Lens mount:  
C mount  
Flange back:  
17.526 mm in air  
Sensitivity:  
F8.0 at 2000 lux (3200 K)  
Minimum illumination:  
4 lux (F2, GAIN: HYPER)  
S/N ratio:  
62 dB (Typical)  
Gain  
STEP/AGC/HYPER selectable  
STEP: 0 to 24 dB by 1 dB step  
AGC: 0 to 24 dB (Limit value: 6 dB, 12 dB, 18 dB, 24 dB selectable)  
HYPER: 30 dB  
Electronic shutter:  
8.0 to 1/100,000 s  
Lens:  
Manual Iris  
AE area:  
Multi/Large/Medium/Spot/Slit/Manual selectable  
AE level:  
Variable  
AE speed:  
Fast/Mid/Slow selectable  
AE detect:  
Average/Peak selectable  
Contrast effect:  
Manual/DynaLatitude/DCC+ selectable  
Knee point:  
High/Normal/Low selectable  
(Contrast Effect: Manual)  
Black stretch:  
Variable (Contrast Effect: Manual)  
Gamma:  
ON/OFF (Variable at ON)  
Pedestal:  
Master and R/B Manual adjustable  
Black balance:  
ABB  
White balance:  
AWB/ATW NORMAL/ATW  
WIDE/MANUAL/3200 K/5600 K selectable  
AWB or ATW R/B Paint, MANUAL R/B Gain  
ATW area:  
NORMAL/MANU selectable  
ATW speed:  
FAST/NORMAL/SLOW selectable  
Detail level:  
ALL/TARGET/OFF (Variable at ALL or TARGET)  
Detail frequency:  
HIGH/MID/LOW selectable

Linear matrix:  
ALL/TARGET/OFF  
Linear matrix mode:  
STANDARD/R Enhance/G Enhance/B Enhance/Manual selectable  
Partial enhance:  
ALL/IN/OUT selectable  
CCD integration mode:  
FIELD/FRAME selectable  
Shading compensation:  
OFF/ON (Manual control)  
Trigger polarity:  
Positive edge trigger/Negative edge trigger selectable  
Baud rate:  
19200/9600/4800/2400/1200 selectable  
Sync:  
RGB/G/OFF selectable  
Strobe:  
Slave  
User file:  
A/B switchable  
(Two pattern memories)  
Scene file:  
STANDARD/MICROSCOPE/FULL  
AUTO/STROBE/FILE A or B  
Output signal  
i.LINK (DV):  
IEEE1394 Based  
VBS:  
1.0 Vp-p, 75 Ω, sync negative  
RGB:  
0.7 Vp-p, 75 Ω, sync switchable  
SYNC:  
2 Vp-p, 75 Ω  
Y:  
1.0 Vp-p, 75 Ω  
C:  
0.286 Vp-p, 75 Ω, without sync  
Operating temperature:  
-5 to 45°C (23 to 113°F)  
Storage temperature:  
-20 to 60°C (-4 to 140°F)  
Power supply:  
AC 100 to 240 V, 50/60 Hz  
Power consumption:  
Max. 18 W  
Dimensions  
CHU: 32 (W) x 38 (H) x 40 (D) mm  
(1 5/16 x 1 1/2 x 1 5/8 inches)  
CCU: 200 (W) x 88 (H) x 242 (D) mm  
(7 7/8 x 3 1/2 x 9 5/8 inches)  
Mass  
CHU: 48 g (1.7 oz)  
CCU: 2.5 kg (5 lb 8 oz)

Connectors:  
DV OUT (6-pin jack)  
RGB/SYNC (9-pin D-sub)  
VIDEO OUT (BNC)  
S-VIDEO (4-pin mini DIN)  
FS/TRIG IN (Stereo Mini jack)  
REMOTE (8-pin mini DIN)  
AC Inlet  
Camera (20-pin)



## Sensor Cameras

### DXC-C33P 3-CCD Color Video Camera

Ideal for use in space-limited locations, the DXC-C33P incorporates one of the smallest/lightest camera head unit featuring three 1/3 type CCDs. In spite of its compact (32 (W) x 38 (H) x 40 (D) mm, 1 5/16 x 1 1/2 x 1 5/8 inches) and lightweight (48 g, 1.7 oz) camera head unit, this model inherits superb picture quality of the DXC Series. Its horizontal resolution is 850 TV lines and the high sensitivity is 2000 lux at F8. Also, various features such as DynaLatitude, Partial Enhance are provided to this model. First for the DXC Series and also first for 3-CDD small head cameras, the DXC-C33P is equipped with a DV output terminal. Thanks to the DV output terminal, video signals can be recorded to i.LINK interface-equipped VTR with no quality deterioration. With the excellent features and medical approval, the DXC-C33P is the right choice for medical fields, and also for demanding applications such as research and industrial fields.



#### Features

●Small camera head\*High picture quality\*i.LINK DV out\*10-bit DSP\*DynaLatitude\*Frame memory\*Partial Enhance\*User-friendly control panel\*Two AE areas preset\*RS-232C interface\*External synchronization (HD/VD, VBS)

#### Supplied Accessories

Tripod adaptor (1)  
AC power cable (1)  
Lens cap (1)  
Panel sheet for RM-C950 (1)  
Operation manual (1)

#### Optional Accessories

VCL-08WM C mount lens (f=8 mm for 3-CCD camera)  
VCL-16WM C mount lens (f=16 mm for 3-CCD camera)  
VCL-25WM C mount lens (f=25 mm for 3-CCD camera)  
DSR-20MDP DVCAM Recorder  
RM-C950 Remote Control Unit  
CCMC-20 Cables 20-pin/20-pin Cable  
VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
CCXC-9DB Cable 9-pin/9-pin Cable  
CCXC-9DD Cable 9-pin/9-pin Cable  
CCMC-9DS Cable 9-pin/4BNCs, DIN 4-pin

## Sensor Cameras

### Specifications

Image device:  
1/3 type IT (Interline Transfer) CCD (x3)

Effective picture elements:  
752 (H) x 582 (V)

Sensing area:  
4.8 (H) x 3.6 (V) mm

Scanning system:  
2:1 interlaced, 625 lines

Horizontal frequency:  
15.625 kHz

Vertical frequency:  
50 Hz

Sync system:  
Internal or external with VBS or HD/VD

Phase control:  
H/SC phase control

Horizontal resolution:  
850 TV lines

Lens mount:  
C mount

Flange back:  
17.526 mm in air

Sensitivity:  
F8.0 at 2000 lux (3200 K)

Minimum illumination:  
4 lux (F2, GAIN: HYPER)

S/N ratio:  
61 dB (Typical)

Gain:  
STEP/AGC/HYPER selectable  
STEP: 0 to 24 dB by 1 dB step  
AGC: 0 to 24 dB (Limit value: 6 dB, 12 dB, 18 dB, 24 dB selectable)  
HYPER: 30 dB

Electronic shutter:  
8.0 to 1/100,000 s

Lens:  
Manual Iris

AE area:  
Multi/Large/Medium/Spot/Slit/Manual selectable

AE level:  
Variable

AE speed:  
Fast/Mid/Slow selectable

AE detect:  
Average/Peak selectable

Contrast effect:  
Manual/DynaLatitude/DCC+ selectable

Knee point:  
High/Normal/Low selectable  
(Contrast Effect: Manual)

Black stretch:  
Variable (Contrast Effect: Manual)

Gamma:  
ON/OFF (Variable at ON)

Pedestal:  
Master and R/B Manual adjustable

Black balance:  
ABB

White balance:  
AWB/ATW NORMAL/ATW  
WIDE/MANUAL/3200 K/5600 K selectable  
AWB or ATW R/B Paint, MANUAL R/B Gain

ATW area:  
NORMAL/MANU selectable

ATW speed:  
FAST/NORMAL/SLOW selectable

Detail level:  
ALL/TARGET/OFF (Variable at ALL or TARGET)

Detail frequency:  
HIGH/MID/LOW selectable

Linear matrix:  
ALL/TARGET/OFF

Linear matrix mode:  
STANDARD/R Enhance/G Enhance/B Enhance/Manual selectable

Partial enhance:  
ALL/IN/OUT selectable

CCD integration mode:  
FIELD/FRAME selectable

Shading compensation:  
OFF/ON (Manual control)

Trigger polarity:  
Positive edge trigger/Negative edge trigger selectable

Baud rate:  
19200/9600/4800/2400/1200 selectable

Sync:  
RGB/G/OFF selectable

Strobe:  
Slave

User file:  
A/B switchable  
(Two pattern memories)

Scene file:  
STANDARD/MICROSCOPE/FULL  
AUTO/STROBE/FILE A or B

Output signal  
i.LINK (DV):  
IEEE1394 Based

VBS:  
1.0 Vp-p, 75  $\Omega$ , sync negative

RGB:  
0.7 Vp-p, 75  $\Omega$ , sync switchable

SYNC:  
2 Vp-p, 75  $\Omega$

Y:  
1.0 Vp-p, 75  $\Omega$

C:  
PAL 0.3 Vp-p, 75  $\Omega$ , without sync

Operating temperature:  
-5 to 45°C (23 to 113°F)

Storage temperature:  
-20 to 60°C (-4 to 140°F)

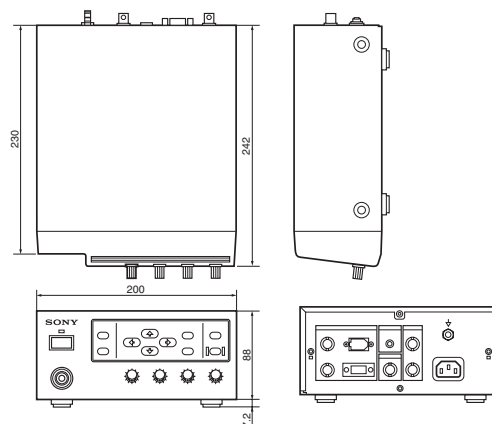
Power supply:  
AC 100 to 240 V, 50/60 Hz

Power consumption:  
Max. 18 W

Dimensions  
CHU: 32 (W) x 38 (H) x 40 (D) mm  
(1 5/16 x 1 1/2 x 1 5/8 inches)  
CCU: 200 (W) x 88 (H) x 242 (D) mm  
(7 7/8 x 3 1/2 x 9 5/8 inches)

Mass  
CHU: 48 g (1.7 oz)  
CCU: 2.5 kg (5 lb 8 oz)

Connectors:  
DV OUT (6-pin jack)  
RGB/SYNC (9-pin D-sub)  
VIDEO OUT (BNC)  
S-VIDEO (4-pin mini DIN)  
FS/TRIG IN (Stereo Mini jack)  
REMOTE (8-pin mini DIN)  
AC Inlet  
Camera (20-pin)



## Sensor Cameras

### DXC-LS1 CCD Color Video Camera

#### Features

●Extremely small and compact camera composed of camera head and camera control unit\*1/4 type Hyper HAD CCD adoption\*High picture quality with 470 TV lines, a high sensitivity of F5.6 at 2000 lux and signal-to-noise ratio of 46 dB\*Advanced color matrix function allows you to adjust R, G and B colors independently for accurate color reproduction\*User preset function for easy set-up (2 patterns)\*Exchangeable camera head\*AE mode (CCD IRIS function combined AGC) provides automatic control over incoming light\*Automatic backlight adjustment\*Built-in electronic zoom function ( $\times 1.00$  to  $\times 3.00$ )\*Four-pattern Light Metering system with selectable detection method\*Alternative White Balance Control modes - AWB, ATW, 5600 K or 3200 K (Trimming with R/B paint function is possible with AWB, 5600 K and 3200 K)\*Shutter speed control capability for long term exposure\*Variable gamma function enables contrast adjustment\*Enhancers function provides crisper, sharper images\*Three different sizes of color bars\*Flicker canceller is provided, freeing the electronic shutter\*Positive films can be shot as negative, or vice versa\*B&W mode for sharp images free from color noise\*Built-in RS-232C interface\*Genlock capability with VBS\*Y/C or VBS output\*Optional CMA-D2 can be used for power supply

#### Supplied Accessories

Tripod adaptor (1)  
Operation manual (1)  
Lens mount cap (1)

#### Optional Accessories

CMA-D2 Camera Adaptor  
AC-E90HG Camera Adaptor  
VCL-04UVM 2/3 type Bayonet Mount Lens  
CCDC Cables 12-pin/4-pin DC Cables  
CCMC-12 Cables 12-pin/12-pin Multi Core Cables  
CCMC-16P Cables 16-pin/20-pin Cable



## Sensor Cameras

### Specifications

Image device:  
1/4 type Interline Transfer Hyper HAD CCD

Picture elements:  
768 (H) × 494 (V)

Sensing area:  
3.2 × 2.4 mm (1/4-inch)

Video signal system:  
NTSC/EIA system

Scanning system:  
525 lines, 2:1 interlace

Sync system:  
Internal or external with VBS

Phase control:  
H (0 to +255)/SC (0/180, 0 to +255)

Horizontal resolution:  
470 TV lines

Lens mount:  
Ultra mount

Sensitivity:  
F5.6 at 2000 lux

Minimum illumination:  
10 lux with F1.2

Gain control:  
AGC/0 to 12 dB (1 dB step) switchable

Electronic shutter  
OFF/MANUAL/AUTO  
MANUAL: 1/60, 1/100, 1/125, 1/250,  
1/1000, 1/2000, 1/4000, 1/8000, 1/10000,  
1/20000, 1/40000 (seconds)  
2 to 512 fields, ODD/EVEN switchable

S/N ratio:  
46 dB

White balance:  
ATW/AWB/5600 K/3200 K selectable  
(R/B paint: -128 to 0 to +128)

AE mode:  
ON/OFF switchable

AE level:  
-60 to 0 to +60

Light metering system:  
Backlight compensation/Full/Center  
(Large)/Center (Small)/Slit (Large)/Slit  
(Small)

Detection method:  
Peak/average switchable

Master pedestal:  
-10 to 0 to +40

H Enhancer:  
-16 to 0 to +15

V Enhancer:  
-16 to 0 to +15

Zoom:  
ON (×1.00 to ×3.00)/OFF switchable

Color matrix  
ON/OFF switchable  
R: -60 to 0 to +60  
G: -60 to 0 to +60  
B: -60 to 0 to +60

Gamma:  
-16 to 0 to +15

Color mode:  
ON/OFF switchable

Color bars:  
FULL/HI/LOW/OFF switchable

Negative/Positive reverse:  
ON/OFF switchable

Menu memory:  
2 pages

Flicker canceller:  
AUTO/OFF switchable

Baud rate:  
19200, 9600, 4800

Video out  
VBS:  
1.0 Vp-p, 75 Ω, sync negative

Y/C:  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.286 Vp-p, 75 Ω, at burst level

Operating temperature:  
0 to 40°C (32 to 104°F)

Storage temperature:  
-20 to 60°C (-4 to 140°F)

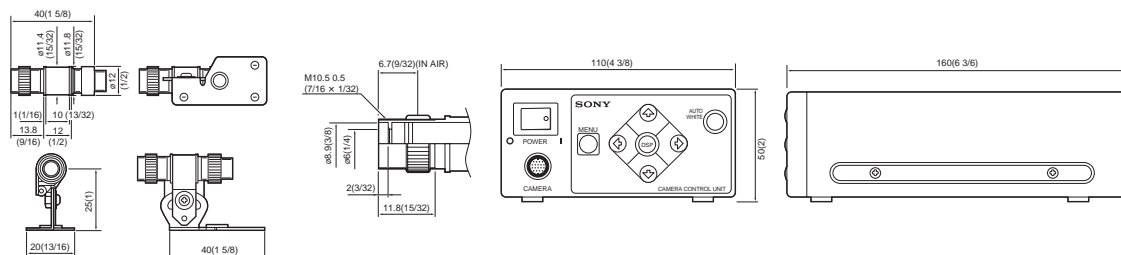
Power requirements:  
DC 12 V (Supplied from CMA-D2)  
DC 9 V (Supplied from AC-E90HG)

Power consumption:  
5 W

Maximum cable length:  
10 m using 10 m optional cable  
(CCMC-16P10)

Mass  
Camera head (without lens and supplied  
cable):  
8 g (0.3 oz)  
Camera control unit:  
Approx. 665 g (1 lb 7 oz)

Connectors:  
Camera head: CAMERA (16-pin)  
Camera control unit: CAMERA (20-pin),  
VIDEO OUT (BNC), DC IN/VBS (12-pin, DC  
jack), Y/C (DIN 4-pin), GENLOCK (BNC),  
RS-232C (8-pin), WE OUT (PIN)



## Sensor Cameras

### DXC-LS1P CCD Color Video Camera

#### Features

●Extremely small and compact camera composed of a camera head and a camera control unit\*1/4 type Hyper HAD CCD adoption\*High picture quality with 460TV lines, a high sensitivity of F5.6 at 2000 lux and an excellent signal-to-noise ratio\*Advanced color matrix function allows you to adjust R, G and B colors independently for accurate color reproduction\*Easy call-up function of favorite settings (2 patterns)\*Exchangeable camera head\*AE control function (CCD IRIS function combined AGC) provides automatic control over incoming light\*Automatic backlight adjustment\*Built-in electronic zoom function (x1.00 to x3.00)\*Four-pattern Light Metering System with selectable detection method\*Alternative White Balance Control modes - AWB, ATW, 5600 K or 3200 K (Trimming with R/B paint function is possible with AWB, 5600 K and 3200 K)\*Shutter speed control capability for long term exposure\*With variable gamma function, the contrast of the picture can be changed for a clear view\*Enhancer function provides crisper, sharper images\*Three different sizes of colour bars\*Flicker canceller is provided, freeing the electronic shutter\*Positive films can be shot as negative, or vice versa\*B&W mode for sharp images free from colour noise\*Built-in RS-232C interface\*Genlock capability with VBS\*Y/C or VBS output\*Optional CMA-D2CE or AC-E90HG can be used for power supply

#### Supplied Accessories

Tripod adaptor (1)  
Operation manual (1)  
Lens mount cap (1)  
LO-UCMT C mount to Ultra mount adaptor (1)

#### Optional Accessories

LO-UCMT C mount to Ultra mount adaptor  
CMA-D2 Camera Adaptor  
AC-E90HG Camera Adaptor  
VCL-04UVM 2/3 type Bayonet Mount Lens  
CCDC Cables 12-pin/4-pin DC Cables  
CCMC-12 Cables 12-pin/12-pin Multi Core Cables  
CCMC-16P Cables 16-pin/20-pin Cable



## Sensor Cameras

### Specifications

Image device:  
1/4 type Interline Transfer Hyper HAD CCD

Picture elements:  
752 (H) × 582 (V)

Sensing area:  
3.2 × 2.4 mm (1/4-inch)

Scanning system:  
625 lines, 2 : 1 interlace

Sync system:  
Internal or external with VBS

Phase control:  
H (0 to +255) / SC (0/180, 0 to +255)

Horizontal resolution:  
460 TV lines

Lens mount:  
Ultra mount

Sensitivity:  
2000 lux with F5.6

Minimum illumination:  
10 lux (F1.2)

Gain control:  
AGC / 0 to -12dB (1dB steps) switchable

Electronic shutter  
OFF/MANUAL/AUTO  
MANUAL: 1/50, 1/100, 1/125, 1/250,  
1/1000, 1/2000, 1/4000, 1/8000,  
1/10000, 1/20000, 1/40000 (seconds), 2  
to 512 fields, ODD/EVEN switchable

Signal-to-noise ratio:  
44 dB

White balance:  
ATW/AWB/5600K/3200K selectable  
(R/B paint: -128 to 0 to +128)

AE mode:  
ON/OFF switchable

AE level:  
-60 to 0 to +60

Light metering system:  
Backlight compensation/Full/Centre  
(Large)/Centre (Small)/Slit (Large)/Slit  
(Small)

Detection method:  
Peak/Average switchable

Master pedestal:  
-10 to 0 to +40

H Enhancer:  
-16 to 0 to +15

Zoom:  
ON (×1.00 to ×3.00)/OFF switchable

Colour matrix  
ON/OFF switchable  
R : -60 to 0 to +60  
G : -60 to 0 to +60  
B : -60 to 0 to +60

Gamma:  
-16 to 0 to +15

Colour mode:  
ON/OFF switchable

Colour bars:  
FULL/HI/LOW/OFF switchable

Negative/Positive reverse:  
ON/OFF switchable

Menu memory:  
2 pages

Flicker canceller:  
AUTO/OFF switchable

Baud rate:  
19200, 9600, 4800

Video out  
VBS:  
1.0 Vp-p, 75 Ω, sync negative

Y/C:  
Y : 1.0 Vp-p, 75 Ω, sync negative  
C : 0.3 Vp-p, at burst level, 75 Ω

Operating temperature:  
0°C to 40°C (32°F to 104°F)

Storage temperature:  
-20°C to 60°C (-4°F to 140°F)

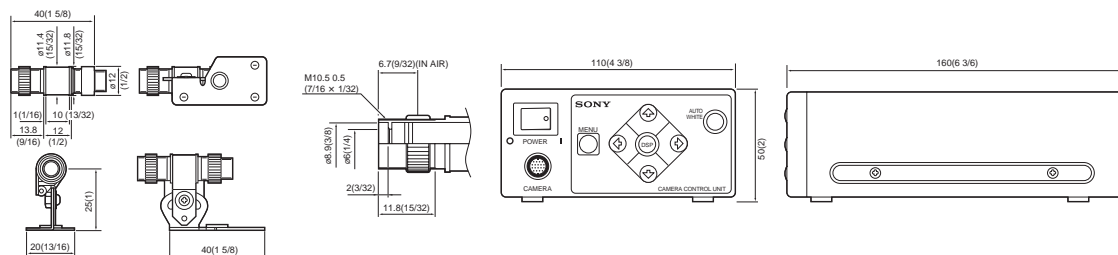
Power requirements:  
DC 12 V (Supplied from CMA-D2CE)  
DC 9 V (Supplied from AC-E90HG)

Power consumption:  
5 W

Maximum cable length:  
10 m using 10m optional cable  
(CCMC-16P10)

Mass  
Camera head (without lens and supplied  
cable): 8 g (0.3 oz)  
Camera control unit: Approx. 665 g (1 lb 7  
oz)

Connectors  
Camera head : CAMERA (16-pin)  
Camera control unit : CAMERA (20-pin),  
VIDEO OUT (BNC), DC IN/VBS (12-pin, DC  
jack), Y/C (DIN 4-pin), GENLOCK (BNC),  
RS-232C (8-pin), WE OUT (PIN)



Sensor Cameras



Sensor Cameras

## Camera Accessories/Peripherals

BKP-5973	74	CCU-D50P	104	HKCU-951	131
BKP-7311	74	CCU-TX50	105	HKCU-953	131
BKP-7312	74	CCU-TX50P	106	LC-421	132
BKP-7911	74	CMA-D2	107	LC-DS300SFT	132
BKP-7912	75	CMA-D2MD	107	LC-DS500	133
BKP-7930	75	CMA-D2MDCE	108	LCR-1	133
BKP-7933	75	CMA-D3	108	LO-23	133
BKP-9057	76	CMA-D3CE	109	LO-26	134
BKP-9330	77	CNU-700	110	MSU-700A	134
BRBK-301	77	DR-100	111	MSU-750	135
BRBK-302	77	DXBK-701	111	MSU-900	136
BRBK-303	77	DXF-51	112	MSU-950	137
BRBK-304	78	HDCU1000	113	MVA-265	138
BRU-300	78	HDCU1500	114	MVA-380	138
BVF-55	79	HDCU-900	115	RCP-700	139
BVF-55CE	80	HDCU-950	116	RCP-720	139
BVF-77	81	HDCU-F950	117	RCP-750	140
BVF-77CE	82	HDFX100	118	RCP-751	141
CA-553	83	HDFX100	119	RCP-D50	142
CA-570	84	HDLA1500	120	RCP-D51	143
CA-570P	85	HDTX100	121	RM-BR300	144
CA-590	86	HDVF-700A	122	RM-C950	144
CA-590P	87	HDVF-9900	123	RMM-301	144
CA-905F	88	HDVF-C30W	123	RM-M7G	145
CA-905L	88	HDVF-C700W	124	RMM-TXC7	145
CA-950	89	HDVF-C750W	125	RM-P9	146
CA-950P	90	HFBK-HD1	126	VCL-0716BXA	146
CAC-12	91	HFBK-SD1	126	VCL-616WEA	147
CAC-6	91	HFBK-TS1	126	VCS-700	147
CA-D50	92	HFBK-XG1	126	VCS-700	148
CA-TX50	93	HFU-X310	127	VCT-14	148
CA-TX50P	95	HKC-SV1	128	VCT-U14	149
CA-WR855	96	HKC-T950	128	VFH-550	149
CCU-590	97	HKCU1001	128	VFH-770	149
CCU-590P	98	HKCU1003	128	WLL-CA50	150
CCU-700A	99	HKCU1005	129	WLL-CA50	151
CCU-700AP	100	HKCU-901	129	WLL-CA55	152
CCU-790	101	HKCU-902	130	WLL-CA55	153
CCU-790P	102	HKCU-903	130	WLL-RX55	154
CCU-D50	103	HKCU-904	131		

## Camera Accessories/Peripherals

### BKP-5973 Control Panel

#### Features

- The BKP-5973 control panel fits on the front of the CCU-550A/550AP and provides rapid, finger-tip access to the main operational controls
- Up to three Scene Files, which are used to store and recall key operational control parameters, are available on the BKP-5973 and white balance for two different color temperature shooting conditions can be stored in memory for later recall
- By using the on-screen menu control and three rotary switches on the BKP-5973, a wide range of set-up parameters can be adjusted



### BKP-7311 SDI Output Board

SDI output board for CCU-700A/700AP

#### Applicable Models

CCU-700A Camera Control Unit  
CCU-700AP Camera Control Unit

### BKP-7312 SDI Input Board

SDI input board for CCU-700A/700AP

#### Applicable Models

CCU-700A Camera Control Unit  
CCU-700AP Camera Control Unit

### BKP-7911 Script Holder

Script holder of one-page type, with lamp

#### Applicable Models

BVP-900 3-chip CCD Studio/OB Camera System  
BVP-900P 3-chip CCD Studio/OB Camera System  
HDC1000 Multi-format HD Camera  
HDC-900 Multi-format HD Camera  
HDC-910 Multi-format HD Camera



## Camera Accessories/Peripherals

### BKP-7912 Script Holder

Script holder of two-page type, with lamp

#### Applicable Models

BVP-900 3-chip CCD Studio/OB Camera  
System

BVP-900P 3-chip CCD Studio/OB Camera  
System

HDC-900 Multi-format HD Camera

HDC-910 Multi-format HD Camera



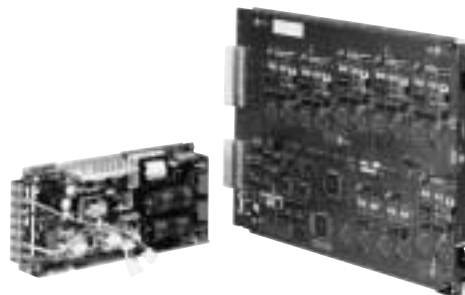
### BKP-7930 Expansion Board

#### Features

- Installing BKP-7930 into CNU-700 camera network command unit allows up to 12 cameras to be connected

#### Applicable Models

CNU-700 Camera Command Network Unit



### BKP-7933 S-Bus Interface Board

#### Features

- Installing the BKP-7933 with CNU-700, Sony routing switcher can be controlled by using the S-Bus interface.
- Switch the Sony router's cross point from MSU-700A/750 camera select
- RCP assignment with PIX/WFM assign
- Change RCP assignment from S-bus equipment
- RCP Preview video select with router
- Receive and display the source name set on the CNU character display
- Decode the serial tally and transfer to CCU

#### Applicable Models

CNU-700 Camera Command Network Unit

## Camera Accessories/Peripherals

# BKP-9057 Viewfinder Saddle

### Features

- For mounting 7-inch type viewfinder (BVF-77/77CE, BVF-7700/7700P) on the CA-905K/905F/905L
- Flexible panning
- Easy handling

\*When the BKP-9057 is used, 'Picture in Picture' function of the seven-inch viewfinder does not work.

### Applicable Models

BVP-9500WS Super Motion Video Camera  
BVP-9500WSP Super Motion Video Camera

### Supplied Accessories

Installation manual (1)  
MS-59/60 board (1)  
VF connector cable (1)  
Harness (1)  
Mounting screws (1)

### Specifications

#### Dimensions:

368 (W) x 373 (H) x 534 (D) mm  
(14 1/2 x 14 3/4 x 21 1/8 inches)  
(with CA-905, without viewfinder)

#### Mass:

2.3 kg (5 lb 1 oz)

#### Connectors:

Viewfinder 20-pin (to camera)  
Viewfinder 25-pin (to VF)

#### Panning degree:

BVP-950/950P:

$\pm 90^\circ$

BVP-550/570:

$\pm 30^\circ$

(After the BKP-9057 is moved 20 mm backward and 20 mm upward, it will become  $\pm 90^\circ$ )



## Camera Accessories/Peripherals

### BKP-9330 Digital Interface Unit

Digital interface unit for Super Motion output

### BRBK-301 Analog/RGB Component Card

Allows an analog/RGB component output

Applicable Models

BRC-300 3-CCD Color Video Camera

BRU-300 Optical Multiplex Unit



### BRBK-302 SDI Card

Allows a SDI output

Applicable Models

BRC-300 3-CCD Color Video Camera

BRU-300 Optical Multiplex Unit



### BRBK-303 Optical Multiplex Card

Allows video output, external synch, and control

Applicable Models

BRC-300 3-CCD Color Video Camera



## Camera Accessories/Peripherals

### BRBK-304 DV Card

Allows a DV output

Applicable Models

BRC-300 3-CCD Color Video Camera

BRU-300 Optical Multiplex Unit



### BRU-300 Optical Multiplex Unit

Features

●The BRU-300 converts uncompressed digital data from the BRC-300 3CCD Color Video Camera (with the optional BRBK-303 Optical Multiplex Card) into various video outputs.

Applicable Models

BRC-300 3-CCD Color Video Camera

Supplied Accessories

AC power cable (1)

Terminal connector (1)

RS-232C cable (1)

Operating instructions (1)

Optional Accessories

BRBK-304 DV Card

RM-BR300 Remote Control Unit

BRBK-301 Analog/RGB Component Card

BRBK-302 SDI Card

CCFC-M100 Optical Fiber Cable



## Camera Accessories/Peripherals

### BVF-55 5-inch Type B/W Viewfinder (EIA)

#### Features

- 650 TV lines of resolution at center ●High brightness—600NIT
- Adjustable center position marker with ON/OFF switch
- Panning and tilting facility
- Easy installation and handling

#### Applicable Models

BVP-950 3-chip CCD Studio/OB Camera  
 BVP-E30 3-chip CCD Portable Color Camera  
 BVP-E30WS 3-chip CCD Portable Color Camera  
 CA-701 Camcorder Adaptor  
 DNW-7 Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder

#### Supplied Accessories

Connecting cables (12-pin - 20-pin) (1)  
 Slide shoe (1)  
 V wedge shoe attachment (1)  
 Screws (1)  
 Monitor hood for studio use (1)

#### Specifications

##### General

Operating temperature:  
 -10 to +50 °C (+14 to +122 °F)

Mass:

1.9 kg (4 lb 3 oz)

External dimensions:

191(W) x 188(H) x 291(D)mm  
 (7 5/8 x 7 1/2 x 11 1/2 inches)

##### Performance

Screen size:

73(H) x 97(W)mm underscan  
 (2 7/8 x 3 7/8 inches)

Power requirements:

DC 12 V

Power consumption:

10 W

Resolution:

650 TV lines at center  
 550 TV lines at corners

Picture distortion:

Less than 3%



## Camera Accessories/Peripherals

### BVF-55CE 5-inch Type B/W Viewfinder (CCIR)

#### Features

●650 TV lines of resolution at center ●High brightness—600NIT ●Adjustable center position marker with ON/OFF switch ●Panning and tilting facility ●Easy installation and handling

#### Applicable Models

BVP-950P 3-chip CCD Studio/OB Camera  
BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera  
CA-701 Camcorder Adaptor  
DNW-7P Betacam SX Camcorder  
DNW-90WSP Betacam SX Camcorder  
DNW-9WSP Betacam SX Camcorder

#### Supplied Accessories

Connecting cables (12-pin - 20-pin) (1)  
Slide shoe (1)  
V wedge shoe attachment (1)  
Screws (1)  
Monitor hood for studio use (1)

#### Specifications

##### General

Operating temperature:

-10 to +50 °C (+14 to +122 °F)

Mass:

1.9 kg (4 lb 3 oz)

External dimensions:

191(W) x 188(H) x 291(D)mm

(7 5/8 x 7 1/2 x 11 1/2 inches)

##### Performance

Screen size:

73(H) x 97(W)mm underscan

(2 7/8 x 3 7/8 inches)

Power requirements:

DC 12 V

Power consumption:

10 W

Resolution:

650 TV lines at center

550 TV lines at corners

Picture distortion:

Less than 3%



## Camera Accessories/Peripherals

### BVF-77 7-inch Type B/W Viewfinder (EIA)

#### Features

- Specifically designed for use with BVP-900/500 series and BVP-9500WS cameras — for direct camera installation
- Can also be attached to the CA-905
- Compact size with reduced height, light weight and low power consumption
- Wide range of mechanical positioning and fixed center of gravity
- Extremely high center resolution of 800 TV lines and wide peaking range contribute to a very crisp image and accurate focusing
- Large, easy to see tally lamps
- Underscan display

#### Applicable Models

BVP-900 3-chip CCD Studio/OB Camera System  
BVP-9500WS Super Motion Video Camera

#### Specifications

##### General

Power requirements:

DC 10.5 to 17.0 V DC 12.0 (typical)

Power consumption:

23 W

Mass:

5.0 kg (11 lb)

External dimensions:

265(W) x 178(H) x 321(D)mm  
(10 1/2 x 7 1/8 x 12 3/4 inches)

##### Performance

CRT:

7-inch 90-degree deflection

Screen size:

120(W) x 90(H) mm (normal)  
(4 3/4 x 3 5/8 inches)

Tilting angle:

+60°/-40°

Brightness:

More than 500cd/m<sup>2</sup> (146fL)

Resolution:

800 lines (center)

600 lines (corner)

Geometric distortion:

Within 1.0%

Linearity:

Within 3%

Stability of raster size:

Within 2%

Controls:

Contrast/Brightness/Peaking

Peaking SW/Power

SW Scan Size SW

Aperture correction:

0 to 15 dB



## Camera Accessories/Peripherals

### BVF-77CE 7-inch Type B/W Viewfinder (CCIR)

#### Features

- Specifically designed for use with BVP-900/500/9500WS series cameras— for direct camera installation
- Can also be attached to the CA-905 series camera adaptors
- Compact size with reduced height, light weight and low power consumption
- Wide range of mechanical positioning and fixed center of gravity
- Extremely high center resolution of 800 TV lines and wide peaking range contribute to a very crisp image and accurate focusing
- Large, easy to see tally lamps
- Underscan display

#### Applicable Models

BVP-900P 3-chip CCD Studio/OB Camera System  
BVP-9500WSP Super Motion Video Camera

#### Specifications

##### General

Power requirements:

DC 10.5 to 17.0 V DC 12.0 (typical)

Power consumption:

23 W

Mass:

5.0 kg (11 lb)

External dimensions:

265(W) x 178(H) x 321(D)mm

(10 1/2 x 7 1/8 x 12 3/4 inches)

##### Performance

CRT:

7-inch 90-degree deflection

Screen size:

120(H) x 90(D) mm (normal)

(4 3/4 x 3 5/8 inches)

Tilting angle:

+60°/-40°

Brightness:

More than 500cd/m<sup>2</sup> (146fL)

Resolution:

800 lines (center)

600 lines (corner)

Geometric distortion:

Within 1.0%

Linearity:

Within 3%

Stability of raster size:

Within 2%

Controls:

Contrast/Brightness/Peaking

Peaking SW/Power

SW Scan Size SW

Aperture correction:

0 to 15 dB



Camera Accessories/Peripherals

CA-553 Camcorder Adaptor

Betacam 50-pin Interface Adaptor

Features

- Interface adaptor to connect cameras to BVV-5 Betacam SP dockable VTR



Applicable Models

- BVP-950 3-chip CCD Studio/OB Camera
- BVP-9500WS Super Motion Video Camera
- BVP-9500WSP Super Motion Video Camera
- BVP-950P 3-chip CCD Studio/OB Camera

Supplied Accessories

- Carrying handle (1)
- Operation manual (1)
- Maintenance manual (1)
- M4 screw (1)
- +B4x5 screw (1)
- Plate (1)

Specifications

- Input/output connector:
  - 68-pin (1)
  - 50-pin (1, for video/audio control signal, power transmission)
- Power requirements:
  - DC 12 V
- Power consumption:
  - 0.3 W
- Operating temperature:
  - 20 to +45°C (-40 to +113°F)
- Storage temperature:
  - 20 to +60°C (-40 to +140°F)

- Dimensions:
  - 119 (W) x 179 (H) x 33 (D) mm
  - 4 3/4 x 7 1/8 x 1 5/16 inches
- Mass:
  - 350 g (12.3 oz)

## Camera Accessories/Peripherals

### CA-570 Camera Adaptor

#### Features

- Furnished with a wideband triax cable interface for use with the CCU-700A/550 series camera control unit
- High picture quality is provided through component (Y/R-Y/B-Y) transmission in the wideband triax cable
- Ideal for studio use—all function switches are located at the rear in order to lower the viewfinder position and for comfortable tripod use in studios
- Two channels of intercom system
- Provides a 26-pin connector for interface with portable VTRs via the CCZ or CCZQ cable
- Prompter output
- Reverse trunk video
- Interface with tracker and return switch box
- Rotary type triax connector



#### Applicable Models

BVP-950 3-chip CCD Studio/OB Camera  
 BVP-9500WS Super Motion Video Camera  
 BVP-E30 3-chip CCD Portable Color Camera  
 BVP-E30WS 3-chip CCD Portable Color Camera  
 CCU-700A Camera Control Unit

#### Supplied Accessories

Triax cable holder (1)  
 Shoulder belt (1)  
 M3 x 6 screw (4)  
 Operation manual (1)  
 Maintenance manual (1)

#### Optional Accessories

CCZ cables 26-pin/26-pin Camera Cable  
 CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power requirements:

DC 10.5 to 17 V

Power consumption:

11 W

Operating temperature:

-20 to +45 °C (-4 to +113 °F)

Storage temperature:

-20 to +50 °C (-4 to +122 °F)

Mass:

2.7 kg (5 lb 15 oz)

Dimensions:

193 (L) x 212 (H) x 130 (W) mm

(7 5/8 x 8 3/8 x 5 1/8 inches)

##### Connectors

Audio input:

XLR-3-pin (2, female), 600  $\Omega$ , balanced,  
 phantom +48 V, AC +12 V

DC input:

XLR 4-pin (1, male), 10.5 to 17 V

DC output:

4-pin (1), 10.5 to 17 V, max 500 mA

Return output:

BNC (1), 1.0 Vp-p, 75  $\Omega$

Prompter input/output:

BNC (1), 1.0 Vp-p, 75  $\Omega$ , floating

VBS genlock input:

BNC (1), 1.0 Vp-p, 75  $\Omega$ , floating

Return control:

6-pin (1)

Earphone:

Mini jack (1), 8  $\Omega$

Camera interface:

68-pin (1)

VTR:

26-pin (1, CCZ type)

CCU (Triax):

Kings type (1)

CCU (Coax):

BNC (option)

INCOM/PGM:

2 CH, Headset XLR-5-pin (1, female)

RCP:

8-pin (female)

Tracker:

10-pin, max. 500 mA, tally drive 50 mA

## Camera Accessories/Peripherals

### CA-570P Camera Adaptor

#### Features

- Furnished with a wideband triax cable interface for use with the CCU-700A/550 series camera control unit
- High picture quality is provided through component (Y/R-Y/B-Y) transmission in the wideband triax cable
- Ideal for studio use—all function switches are located at the rear in order to lower the viewfinder position and for comfortable tripod use in studios
- Two channels of intercom system
- Provides a 26-pin connector for interface with portable VTRs via the CCZ or CCZQ cable
- Prompter output
- Reverse trunk video
- Interface with tracker and return switch box
- Rotary type triax connector



Camera Accessories/Peripherals

#### Applicable Models

BVP-950WSP Super Motion Video Camera  
 BVP-950P 3-chip CCD Studio/OB Camera  
 BVP-E30P 3-chip CCD Portable Color Camera  
 BVP-E30WSP 3-chip CCD Portable Color Camera  
 CCU-700AP Camera Control Unit

#### Supplied Accessories

Triax cable holder (1)  
 Shoulder belt (1)  
 M3 x 6 screw (4)  
 Operation manual (1)  
 Maintenance manual (1)

#### Optional Accessories

CCZ cables 26-pin/26-pin Camera Cable  
 CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power requirements:  
 DC 10.5 to 17 V  
 Power consumption:  
 11 W  
 Operating temperature:  
 -20 to +45 °C (-4 to +113 °F)  
 Storage temperature:  
 -20 to +50 °C (-4 to +122 °F)  
 Mass:  
 2.7 kg (5 lb 15 oz)  
 Dimensions:  
 193 (L) x 212 (H) x 130 (W) mm  
 (7 5/8 x 8 3/8 x 5 1/8 inches)

##### Connectors

Audio input:  
 XLR-3-pin (2, female), 600  $\Omega$ , balanced, phantom +48 V, AC +12 V  
 DC input:  
 XLR-4-pin (1, male), 10.5 to 17 V  
 DC output:  
 4-pin (1), 10.5 to 17 V, max 500 mA  
 Return output:  
 BNC (1), 1.0 Vp-p, 75  $\Omega$

##### Prompter input/output:

BNC (1), 1.0 Vp-p, 75  $\Omega$ , floating  
 VBS genlock input:

BNC (1), 1.0 Vp-p, 75  $\Omega$ , floating

##### Return control:

6-pin (1)

##### Earphone:

Mini jack (1), 8  $\Omega$

##### Camera interface:

68-pin (1)

##### VTR:

26-pin (1, CCZ type)

##### CCU (Triax):

Kings type

##### CCU (Coax):

BNC (option)

##### INCOM/PGM:

2 CH, Headset XLR 5-pin (1, female)

##### RCP:

8-pin (female)

##### Tracker:

10-pin, max. 500 mA, tally drive 50 mA

## Camera Accessories/Peripherals

### CA-590 Camera Adaptor

The CA-590 is a triax camera adaptor used to connect the BVP-E30/E30WS series cameras to the CCU-790/590 Camera Control Unit.

#### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera  
CCU-590 Portable Camera Control Unit  
CCU-790 Camera Control Unit

#### Supplied Accessories

Triax cable holder (2)  
Carrying belt (1)  
M3 x 6 screw (4)  
Operation manual (1)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power consumption  
8 W

Operating temperature  
-20 to +45 °C (-4 to +113 °F)

Storage temperature  
-20 to +50 °C (-4 to +122 °F)

Dimensions (W x H x D)  
120 x 211 x 202 mm (4 3/4 x 8 3/8 x 8 inches)

Mass  
2.8 kg (6 lb 3 oz)

##### Input/output connectors

Audio input (CH-1/CH-2)  
XLR-3-pin, female, 600  $\Omega$ , balanced

DC input  
XLR-4-pin, DC 10.5 to 17 V

DC output  
4-pin, DC 10.5 to 17 V, max. 1.5 A

Return  
BNC, 1.0 Vp-p, 75  $\Omega$

Prompter  
BNC, 1.0 Vp-p, 75  $\Omega$

Return control  
6-pin

Earphone  
Mini-jack, 8  $\Omega$

Camera interface  
68-pin

CCU

Triax

Intercom (1, 2)  
XLR-5-pin, female

Remote  
8-pin

Tracker  
10-pin



## Camera Accessories/Peripherals

### CA-590P Camera Adaptor

The CA-590P is a triax camera adaptor used to connect the BVP-E30P/E30WSP series cameras to the CCU-790P/590P Camera Control Unit.

#### Applicable Models

BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera  
CCU-590P Portable Camera Control Unit  
CCU-790P Camera Control Unit

#### Supplied Accessories

Triax cable holder (2)  
Carrying belt (1)  
M3 x 6 screw (4)  
Operation manual (1)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable



## Camera Accessories/Peripherals

### CA-905F Large Lens Adaptor (Fischer Type)

#### Features

- Adaptor to attach a large lens to portable cameras
- Compact and lightweight ●Easy lens attachment and detachment ●Vertical/horizontal adjustment ●Stabilizing mechanism for complete matching with the lens mount and the camera position ●Combined use with 7-inch type viewfinder (with BKP-9057 viewfinder saddle) provides a wide range of applications

\*CA-905 can not be used in the following combination of a viewfinder and a CCU —CA-905+BVF-7700/7700P and CCU-550A/550AP



Lens, camera, camera adaptor, viewfinder, VF saddle, tripod are optional

#### Applicable Models

BVP-950P 3-chip CCD Studio/OB Camera  
BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera

#### Supplied Accessories

Number plate (2)  
Cable clamp (2)  
Operation manual including BKP-9057 operation (1)  
Maintenance manual part 1 (1)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power Consumption:  
90 W (w/ lens, VF and BKP-9057)  
Operation temperature:  
-20 to + 45 °C (-4 to 113°F)  
Storage temperature:  
-20 to + 55°C (-4 to 130°F)  
Mass:  
12 kg (26 lb 7 oz)

#### Dimensions:

368 x 327 x 534 mm  
(14 1/2 x 12 7/8 x 21 1/8 inches)

#### Connectors

CCU:  
Triax (Fischer type)  
Lens:  
12-pin (to camera)  
Lens:  
36-pin (to lens)  
Command:  
8-pin (to camera)

### CA-905L Large Lens Adaptor (Lemo Type)

#### Features

- Adaptor to attach a large lens to portable cameras
- Compact and lightweight ●Easy lens attachment and detachment ●Vertical/horizontal adjustment ●Stabilizing mechanism for complete matching with the lens mount and the camera position ●Combined use with 7-inch type viewfinder (with BKP-9057 Viewfinder Saddle) provides a wide range of camera applications



Lens, camera, camera adaptor, viewfinder, VF saddle, tripod are optional

#### Applicable Models

BVP-950WS Super Motion Video Camera  
BVP-950WSP Super Motion Video Camera

#### Supplied Accessories

Number plate (2)  
Cable clamp (2)  
Operation manual including BKP-9057 operation (1)  
Maintenance manual part 1 (1)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power Consumption:  
90 W (w/ lens, VF and BKP-9057)  
Operation temperature:  
-20 to + 45 °C (-4 to 113°F)  
Storage temperature:  
-20 to + 55°C (-4 to 130°F)  
Mass:  
12 kg (26 lb 7 oz)  
Dimensions:  
368 x 327 x 534 mm  
(14 1/2 x 12 7/8 x 21 1/8 inches)

#### Connectors

CCU:  
Triax (Lemo type)  
Lens:  
12-pin (to camera)  
Lens:  
36-pin (to lens)  
Command:  
8-pin (to camera)

## Camera Accessories/Peripherals

### CA-950 Camera Adaptor

#### Features

- Attaches to BVP-9500WS Super Motion Camera to transfer signals captured at three times normal frame rate
- Can also be used with the BVP-950 to extend the cable run up to 3000 meters between the camera head and CCU
- Transmission distance of up to 3000 meters for both standard and Super Motion signals
- Two BVP-950 cameras with the CA-950 can be controlled via a single fiber cable (Dual Camera system)
- Combined use with BVP-9500WS and CCU-900(\*1) camera control unit , and MAV-555(\*2) multi-access video disk recorder realizes a complete digital Super Motion video system

(\*1) Requires optional BKP-9330 board (\*2) Requires optional BKMA-520SS



Camera Accessories/Peripherals

#### Applicable Models

BVP-950 3-chip CCD Studio/OB Camera  
BVP-9500WS Super Motion Video Camera  
BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera

#### Supplied Accessories

Carrying belt (1)  
Operation manual (1)  
Installation and maintenance manual (1)  
Cable holder (1)  
M3 x 6 screws (4)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable  
CAC-6 Return Video Selector

#### Specifications

##### General

Power requirements:  
AC 240 V, 50/60 Hz or DC 10.5 to 17 V  
Power consumption:  
17 W  
Operating temperature:  
-20 to 45°C (-4 to 113°F)  
Storage temperature:  
-20 to 60°C (-4 to 140°F)  
Mass:  
2.7 kg (5 lb 15 oz)  
Dimensions:  
148 (W) x 212 (H) x 192 (D) mm  
(5 7/8 x 8 3/8 x 7 5/8 inches)  
Transmission distance:  
3000 m (approx. 1.9 miles) with power supply\*

##### Connectors

Audio input:  
XLR 3-pin (female, x 2), -60 dB/-20 dB selectable, phantom +48 V  
DC input:  
XLR 4-pin (male), 10.5 to 17 V  
DC output:  
XLR 4-pin, 10.5 to 17 V, max. 500 mA

##### Serial digital input:

BNC, 270 Mb/s, 800 mVp-p, 75 Ω  
(SMPTE259M/ITU-R BT.656-3)

##### Serial digital output:

BNC, 270 Mb/s, 800 mVp-p, 75 Ω  
(SMPTE259M/ITU-R BT.601-4)

##### Prompter/Genlock input:

BNC, 1.0 Vp-p, 75 Ω

##### Test output:

BNC, 1.0 Vp-p, 75 Ω

##### Return control:

6-pin

##### Earphone:

Mini-jack, 8 Ω

##### Camera interface:

68-pin (2)

##### CCU:

Optical fiber

##### INCOM/PGM:

2 CH, headset XLR 5-pin, Dynamic MIC  
-60 dB/Carbon MIC -20 dB selectable

##### Remote:

8-pin (female)

##### Tracker:

12-pin

\*Depends on the fiber optic cable performance and the number of cable interconnections.

## Camera Accessories/Peripherals

### CA-950P Camera Adaptor

#### Features

- Attaches to BVP-9500WSP Super Motion Camera to transfer signals captured at three times normal frame rate
- Can also be used with the BVP-950P to extend the cable run up to 3000 meters between the camera head and CCU
- Transmission distance of up to 3000 meters for both standard and Super Motion signals
- Two BVP-950P cameras with the CA-950P can be controlled via a single fiber cable (Dual Camera system)
- Combined use with BVP-9500WSP and CCU-900P(\*1) camera control unit, and MAV-555(\*2) multi-access video disk recorder realizes a complete digital Super Motion video system

(\*1) Requires optional BKP-9330 board (\*2) Requires optional BKMA-520SS



#### Applicable Models

BVP-9500WSP Super Motion Video Camera  
BVP-950P 3-chip CCD Studio/OB Camera  
BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera

#### Supplied Accessories

Carrying belt (1)  
Operation manual (1)  
Installation and maintenance manual (1)  
Cable holder (1)  
M3 x 6 screws (4)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable  
CAC-6 Return Video Selector

#### Specifications

##### General

Power requirements:  
AC 240 V, 50/60 Hz or DC 10.5 to 17 V  
Power consumption:  
17 W  
Operating temperature  
-20 to 45°C (-4 to 113°F)  
Storage temperature:  
-20 to 60°C (-4 to 140°F)  
Mass:  
2.7 kg (5 lb 15 oz)  
Dimensions:  
148 (W) x 212 (H) x 192 (D) mm  
(5 7/8 x 8 3/8 x 7 5/8 inches)  
Transmission distance:  
3000 m (approx. 1.9 miles) with power supply\*

##### Connectors

Audio input:  
XLR 3-pin (female, x 2), -60 dB/-20 dB selectable, phantom +48 V  
DC input:  
XLR 4-pin (male), 10.5 to 17 V  
DC output:  
XLR 4-pin, 10.5 to 17 V, max. 500 mA

##### Serial digital input:

BNC, 270 Mb/s, 800 mVp-p, 75 Ω  
(SMPTE259M/ITU-R BT.656-3)

##### Serial digital output:

BNC, 270 Mb/s, 800 mVp-p, 75 Ω  
(SMPTE259M/ITU-R BT.601-4)

##### Prompter/Genlock input:

BNC, 1.0 Vp-p, 75 Ω

##### Test output:

BNC, 1.0 Vp-p, 75 Ω

##### Return control:

6-pin

##### Earphone:

Mini-jack, 8 Ω

##### Camera interface:

68-pin (2)

##### CCU:

Optical fiber

##### INCOM/PGM:

2 CH, headset XLR 5-pin, Dynamic MIC  
-60 dB/Carbon MIC -20 dB selectable

##### Remote:

8-pin (female)

##### Tracker:

12-pin

\*Depends on the fiber optic cable performance and the number of cable interconnections.

## Camera Accessories/Peripherals

### CAC-12 Camera Microphone Holder

#### Features

- Allows microphone direction to be adjusted
- For attaching the ECM-647/670 or the C-74 condensor microphone to cameras and camcorders

#### Applicable Models

DSR-250 DVCAM Camcorder  
 DSR-250P DVCAM Camcorder  
 DSR-PDX10 DVCAM Camcorder  
 DSR-PDX10P DVCAM Camcorder  
 DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50PH 3-chip CCD Portable Color Camera  
 DXC-D50PK 3-chip CCD Portable Color Camera  
 DXC-D50PL 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 DXC-D50WSPL 3-chip CCD Portable Color Camera  
 HDC1500 Multi-format HD Camera  
 HDC-930 Multi-format HD Camera  
 HDC-950 Multi-format HD Camera  
 HDC-F950 Digital 4:4:4 HD Camera System



Camera Accessories/Peripherals

### CAC-6 Return Video Selector

Return video selector for studio and portable cameras

#### Applicable Models

CA-950 Camera Adaptor  
 CA-950P Camera Adaptor  
 DNW-7 Betacam SX Camcorder  
 DNW-7P Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-90WSP Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DNW-9WSP Betacam SX Camcorder  
 HDC1500 Multi-format HD Camera  
 HDC-900 Multi-format HD Camera  
 HDC-910 Multi-format HD Camera  
 HDC-930 Multi-format HD Camera  
 HDC-950 Multi-format HD Camera



## Camera Accessories/Peripherals

### CA-D50 Camera Adaptor

#### Features

- Camera adaptor for use with the CCU-D50/D50P Camera Control Unit
- Dockable to Sony DXC cameras equipped with a 76-pin digital connector
- Interfaces with 26-pin equipped Sony portable VTRs
- Interfaces with the BKP-L551 Battery Adaptor with the appropriate service part.(\*)

(\*)Please contact your nearest Sony office.

#### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50PH 3-chip CCD Portable Color Camera  
 DXC-D50PK 3-chip CCD Portable Color Camera  
 DXC-D50PL 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 DXC-D50WSPL 3-chip CCD Portable Color Camera

#### Supplied Accessories

Operation manual (1)

#### Optional Accessories

CCZ-A Cables 26-pin/26-pin Cable

#### Specifications

##### General

Power requirements:

DC 12 V

Power consumption:

Approx. 3.8 W

Operating temperature:

-10°C to 45°C (14°F to 113°F)

Storage temperature:

-20°C to 55°C (-4°F to 131°F)

Dimensions:

113 (W) × 183 (H) × 168 (D) mm

(7 1/4 × 4 1/2 × 6 5/8 inches)

Mass:

1.1 kg (2 lb 7 oz)

##### Input/Output connectors

Camera interface:

Pro 76-pin DIGITAL (1)

CCU/VTR/CMA:

Sony Z-type 26-pin (1)

SDI output:

BNC (1), 270 Mb/s, 0.8 Vp-p, 75 Ω

Genlock/Prompter output:

BNC (1), 1.0 Vp-p, 75 Ω

Earphone

Mini jack

Intercom:

Mini intercom jack

DC input:

XLR 4-pin (1), 10.5 to 17.0 V



## Camera Accessories/Peripherals

### CA-TX50 Camera Adaptor

The CA-TX50 is a camera adaptor, used with the DXC-D50 series portable video camera for connection with the CCU-TX50 Triax Camera Control Unit.

#### Applicable Models

CCU-TX50 Camera Control Unit  
 DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera

#### Supplied Accessories

Operation manual (1)

#### Optional Accessories

AC-DN10 AC Adaptor/Charger  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-861B UHF Synthesized Diversity Tuner (U6264)  
 WRR-861B UHF Synthesized Diversity Tuner (U6668)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)  
 DXF-51 5-inch Monochrome Viewfinder  
 WRR-861 series UHF portable tuner is not available in some areas.



# Camera Accessories/Peripherals

## Specifications

### General

Power requirements:

DC 12 V (DC 180 V when supplied via the  
CCU connector)

Power consumption:

CA (Internal): 7.3 W  
Max. 58 W (DC 12 V input)  
Max. 67 W (DC 180 V input)

Operating temperature:

-10 °C to 45 °C (14 °F to 113 °F)

Storage temperature:

-20 °C to 60 °C (-4 °F to 140 °F)

Mass:

Approx. 2.5 kg (5 lb 5 oz)

Dimensions (W x H x D):

206 x 212 x 131 mm  
(8 1/8 x 8 3/8 x 5 1/4 inches)

### Signal inputs/outputs

CCU:

Triax (Kings type)

CAMERA:

Pro 76-pin Digital

PROMPTER:

BNC type, 1.0 Vp-p, 75 Ω

RETURN:

BNC type, 1.0 Vp-p, 75 Ω

INTERCOM/PROGRAM:

XLR 5-pin (for Headset)  
Input level: -60 dBs (dynamic)  
Output level: -∞ to +12 dBs

AUDIO IN (CH-1/2):

XLR 3-pin (2), 600 Ω, balanced

Input level:

Mic in: -60 dB  
Line in: -20 dB

DC IN:

XLR 4-pin, 10.5 V to 17 V

DC OUT:

4-pin, 10.5 V to 17 V, Max 1.5 A

EARPHONE

Mini jack

Camera Accessories/Peripherals

## Camera Accessories/Peripherals

### CA-TX50P Camera Adaptor

The CA-TX50P is a camera adaptor used with the DXC-D50P series portable video camera for connection with the CCU-TX50P Triax Camera Control Unit.

#### Applicable Models

CCU-TX50P Camera Control Unit  
DXC-D50PH 3-chip CCD Portable Color Camera  
DXC-D50PK 3-chip CCD Portable Color Camera  
DXC-D50PL 3-chip CCD Portable Color Camera  
DXC-D50WSPL 3-chip CCD Portable Color Camera

#### Supplied Accessories

Operation manual (1)

#### Optional Accessories

AC-DN10 AC Adaptor/Charger  
WRR-861A UHF Synthesized Diversity Tuner (AU)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)  
DXF-51 5-inch Monochrome Viewfinder

WRR-861 series UHF portable tuner is not available in some areas.

#### Specifications

##### General

Power requirements:

DC 12 V (DC 180 V when supplied via the CCU connector)

Power consumption:

CA (Internal): 7.3 W

Max. 58 W (DC 12 V input)

Max. 67 W (DC 180 V input)

Operating temperature:

-10 °C to 45 °C (14 °F to 113 °F)

Storage temperature:

-20 °C to 60 °C (-4 °F to 140 °F)

Mass:

Approx. 2.5 kg (5 lb 5 oz)

Dimensions (W x H x D):

206 x 212 x 131 mm

(8 1/8 x 8 3/8 x 5 1/4 inches)

##### Signal inputs/outputs

CCU:

Triax (Fischer type)

CAMERA:

Pro 76-pin Digital

PROMPTER:

BNC type, 1.0 Vp-p, 75 Ω

RETURN:

BNC type, 1.0 Vp-p, 75 Ω

INTERCOM/PROGRAM:

XLR 5-pin (for Headset)

Input level: -60 dBs (dynamic)

Output level: -∞ to +12 dBs

AUDIO IN (CH-1/2):

XLR 3-pin (2), 600 Ω, balanced

Input level:

Mic in: -60 dB

Line in: -20 dB

DC IN:

XLR 4-pin, 10.5 V to 17 V

DC OUT:

4-pin, 10.5 V to 17 V, Max 1.5 A

EARPHONE

Mini jack



## Camera Accessories/Peripherals

# CA-WR855 Camera Adaptor

### Features

- Allows a WRR-855A/855B to be mounted on Sony DSR-390/570WS/400/450WS DVCAM camcorders
- Direct audio/power connection interfaces

### Applicable Models

DSR-400K DVCAM Camcorder  
DSR-400L DVCAM Camcorder  
DSR-400PK DVCAM Camcorder  
DSR-400PL DVCAM Camcorder  
DSR-450WSL DVCAM Camcorder  
DSR-450WSPL DVCAM Camcorder  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (66U)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855B UHF Synthesized Diversity Tuner (6264U)  
WRR-855B UHF Synthesized Diversity Tuner (6668U)



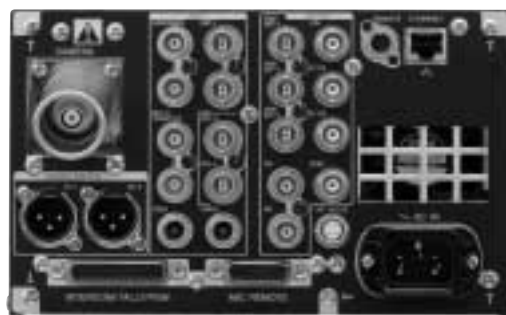
## Camera Accessories/Peripherals

### CCU-590 Portable Camera Control Unit

The CCU-590 is a half-rack size portable triax camera control unit for use with a CA-590 triax camera adaptor attached to a BVP-E30/E30WS series camera.

#### Features

- Wideband transmission (10 MHz for Y and 14.5 MHz for R-Y/B-Y)
- Long-distance transmission - up to 1400 m via a 14.5 mm dia. cable
- Three SDI or analog composite outputs
- One component output (Y/R-Y/B-Y or G/R/B)
- Four inputs for return video (RET-1/2: analog composite, RET-3/4: SDI)
- Built-in Ethernet interface (100Base-T) for future use
- RM-B750 Remote Control Unit attachable on the front panel
- Teleprompter support
- Support for two-channel intercom systems
- (four-wire/RTS/Clearcom)
- Two-channel program audio
- Two-channel microphone system (two XLR connectors)



Camera Accessories/Peripherals

#### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera

#### Supplied Accessories

AC power cord (1)  
AC power plug holder (1)  
4-pin connector (1)  
Number plate (1)  
Operation manual (1)

#### Optional Accessories

CA-590 Camera Adaptor  
CCA-5 Cables 8-pin/8-pin Remote Control Cable  
RM-B750 Remote Control Unit

#### Specifications

##### General

Power requirements  
AC 100 to 240 V, 50/60 Hz, maximum 1.8 A  
Operating temperature  
-10 to +40 °C (+14 to +104 °F)  
Dimensions (W x H x D)  
200 x 124 x 365 mm (7 7/8 x 5 x 14 3/8 inches)  
Mass  
Approx. 5.5 kg (12 lb 2 oz)

##### Signal inputs

Reference  
BNC (loop-through), VBS/BS, 1.0 Vp-p, 75 Ω  
Return (1, 2) (\*1)  
BNC(loop-through), VBS, 1.0 Vp-p, 75 Ω  
SDI return (3, 4)  
BNC, SDI/VBS selectable  
VBS: 1.0 Vp-p, 75 Ω, SDI: SMPTE 259M  
Prompter (\*1)  
BNC (loop-through), VBS, 1.0 Vp-p, 75 Ω

##### Signal outputs

VBS/SDI  
BNC (x3), VBS/SDI selectable  
VBS: 1.0 Vp-p, 75 Ω, SDI: SMPTE 259M

#### Analog component

BNC (x3 for 1 set), Y/R-Y/B-Y or G/R/B switchable  
Y: 1.0 Vp-p, 75 Ω, R-Y/B-Y: 700 mVp-p, 75 Ω, R/G/B: 700 mVp-p, 75 Ω  
PIX  
BNC, 1.0 Vp-p, 75 Ω  
WF  
BNC, 1.0 Vp-p, 75 Ω, 714 mVp-p, 75 Ω  
WF mode  
4-pin  
Audio  
XLR-3-pin (x2), 0 dBu/-20 dBu, balanced  
Sync  
BNC, 0.3 Vp-p, 75 Ω

#### Camera input/output signals

Camera  
Triax  
Coax  
BNC, 75 Ω  
Remote  
8-pin  
Ethernet  
IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX  
Intercom/tally/program  
D-sub 25-pin  
4W/RTS  
Tally: DC 24 V, TTL level or contact selectable  
Microphone remote  
D-sub 15-pin  
Intercom (front)  
XLR-5-pin

(\*1) The same signal is input to the RET-2 and the PROMPTER connectors.

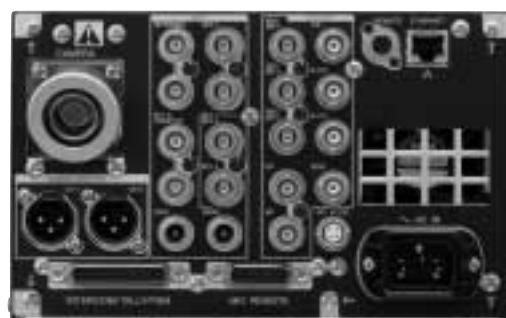
## Camera Accessories/Peripherals

### CCU-590P Portable Camera Control Unit

The CCU-590P is a half-rack size portable triax camera control unit for use with a CA-590P triax camera adaptor attached to a BVP-E30P/E30WSP series camera.

#### Features

- Wideband transmission (10 MHz for Y and 14.5 MHz for R-Y/B-Y)
- Long-distance transmission - up to 1400 m via a 14.5 mm dia. cable
- Three SDI or analog composite outputs
- One component output (Y/R-Y/B-Y or G/R/B)
- Four inputs for return video (RET-1/2: analog composite, RET-3/4: SDI)
- Built-in Ethernet interface (100Base-T) for future use
- RM-B750 Remote Control Unit attachable on the front panel
- Teleprompter support
- Support for two-channel intercom systems (four-wire/RTS/Clearcom)
- Two-channel program audio
- Two-channel microphone system (two XLR connectors)



#### Applicable Models

BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera

#### Supplied Accessories

AC power cord (1)  
AC power plug holder (1)  
4-pin connector (1)  
Number plate (1)  
Operation manual (1)

#### Optional Accessories

CA-590P Camera Adaptor  
CCA-5 Cables 8-pin/8-pin Remote Control Cable  
RM-B750 Remote Control Unit

#### Specifications

##### General

Power requirements  
AC 100 to 240 V, 50/60 Hz, maximum 1.8 A  
Operating temperature  
-10 to +40 °C (+14 to +104 °F)  
Dimensions (W x H x D)  
200 x 124 x 365 mm (7 7/8 x 5 x 14 3/8 inches)  
Mass  
Approx. 5.5 kg (12 lb 2 oz)

##### Signal inputs

Reference  
BNC (loop-through), VBS/BS, 1.0 Vp-p, 75 Ω  
Return (1, 2) (\*1)  
BNC (loop-through), VBS, 1.0 Vp-p, 75 Ω  
SDI return (3, 4)  
BNC, SDI/VBS selectable  
VBS: 1.0 Vp-p, 75 Ω, SDI: SMPTE 259M  
Prompter (\*1)  
BNC (loop-through), VBS, 1.0 Vp-p, 75 Ω

##### Signal outputs

VBS/SDI  
BNC (x3), VBS/SDI selectable  
VBS: 1.0 Vp-p, 75 Ω, SDI: SMPTE 259M

#### Analog component

BNC (x3 for 1 set), Y/R-Y/B-Y or G/R/B switchable  
Y: 1.0 Vp-p, 75 Ω, R-Y/B-Y: 525 mVp-p, 75 Ω  
R/G/B: 700 mVp-p, 75 Ω

#### PIX

BNC, 1.0 Vp-p, 75 Ω

#### WF

BNC, 1.0 Vp-p, 75 Ω, 700 mVp-p, 75 Ω

#### WF mode

4-pin

#### Audio

XLR-3-pin (x2), 0 dBu/-20 dBu, balanced

#### Sync

BNC, 0.3 Vp-p, 75 Ω

#### Camera input/output signals

##### Camera

Triax

Coax

BNC, 75 Ω

Remote

8-pin

Ethernet

IEEE 802.3 10BASE-T, IEEE 802.3u

100BASE-TX

Intercom/tally/program

D-sub 25-pin

4W/RTS

Tally: DC 24 V, TTL level or contact selectable

Microphone remote

D-sub 15-pin

Intercom (front)

XLR-5-pin

(\*1) The same signal is input to the RET-2 and the PROMPTER connectors.

## Camera Accessories/Peripherals

# CCU-700A Camera Control Unit

### Features

- Wideband triax transmission—with the advantage of avoiding differential time delays and differential gain via a component (R-Y/Y/B-Y) transmission system
- With component SDI outputs (BNC type) (option)
- Remote operation of up to 2000 m for wideband transmission and up to 3000 m for normal bandwidth transmission (option) with  $\phi 14.5$  mm triax cable
- Built-in bi-directional teleprompter video channel
- Mono color function available to VBS and Y, R-Y and B-Y outputs
- With character display function
- Built-in contrast and saturation functions
- Flexible intercom system—two channels for producer/engineer and 4W or RTS or 2W selectable by internal switch
- MIC gain (camera head) remote controllable
- Flickerless sequential mode (R/G/B) standard for WFM output
- Directly interfaces with MSU-700A/750, CNU-700/500 and RCP-700 series
- 19-inch rack mountable



Camera Accessories/Peripherals

### Applicable Models

BVP-900 3-chip CCD Studio/OB Camera System  
 BVP-950 3-chip CCD Studio/OB Camera  
 BVP-E30 3-chip CCD Portable Color Camera  
 BVP-E30WS 3-chip CCD Portable Color Camera

### Supplied Accessories

AC power cord (1)  
 Plug holder for the AC power cord (1)  
 4-pin connectors (1)  
 19-pin connectors (1)  
 Number plate [set] (1)  
 Operation manual (1)  
 Maintenance manual (1)

### Optional Accessories

BKP-7900 Extension Board  
 BKP-7931 Sub Encoder Board  
 BKP-7311 SDI Output Board  
 BKP-7312 SDI Input Board  
 CCA-5 Cables 8-pin/8-pin Remote Control Cable  
 CA-570 Camera Adaptor

### Specifications

#### General

Power requirements:

AC 120 V  $\pm 10\%$ , 50/60 Hz

Power consumption:

Max 450 VA

Operating temperature:

0 to +45°C (+32 to +113° F)

Mass:

19 kg (41 lb 14 oz)

Dimensions:

424(W) x 133(H) x 400(D)mm  
 (16 3/4 x 5 1/4 x 15 3/4 inches)

#### Input signals

Return video 1, 2 in \*1(3, 4):

BNC, loop-through, 1.0 Vp-p, 75  $\Omega$

Reference input:

BNC, loop-through, VBS, 1.0 Vp-p, 75  $\Omega$

Prompter input:

BNC, loop-through, 1.0 Vp-p, 75  $\Omega$

#### Output signals

Encoded video output:

BNC (3), VBS, 1.0 Vp-p, 75  $\Omega$

Component SDI:

BNC (2, optional), 270 Mb/s

R/G/B output:

BNC, 700 mVp-p, 75  $\Omega$

Y/R-Y/B-Y output:

Y: 1.0 Vp-p (video: 0.714, sync: 0.286), 75  $\Omega$

R-Y: 0.7 Vp-p, 75  $\Omega$

B-Y: 0.7 Vp-p, 75  $\Omega$

Waveform monitor output:

BNC (2), 0.714 Vp-p, 75  $\Omega$

Picture monitor output:

BNC (2), 1.0 Vp-p, 75  $\Omega$

Character video output

Video:

BNC, 3 Vp-p

Sync:

BNC, 0.286 Vp-p

Sync output (analog BNC):

0.3 Vp-p, negative, 75  $\Omega$

Mic out (2-CH, XLR 3-pin)

0 dB/-20 dB selectable

#### Input/output signals

Camera

Triax:

Kings type (1)

Coax:

BNC (1)

#### Communication

Intercom (RTS):

XLR-3-pin, loop-through

Intercom (4W/2W)/Tally/PGM:

19-pin

Intercom PGM (front panel):

XLR-5-pin

#### Remote control

Remote:

8-pin

AUX:

8-pin

#### Others

WF mode:

4-pin

Microphone gain remote control:

D-sub 15-pin

Intercom remote control:

D-sub 25-pin

\*Available with option

## Camera Accessories/Peripherals

# CCU-700AP Camera Control Unit

### Features

- Wideband triax transmission—with the advantage of avoiding differential time delays and differential gain via a component (R-Y/Y/B-Y) transmission system
- With component SDI outputs (BNC type) (option)
- Remote operation of up to 2000 m for wideband transmission and up to 3000 m for normal bandwidth transmission (option) with  $\phi 14.5$  mm triax cable
- Built-in bi-directional teleprompter video channel
- Mono color function available to VBS and Y, R-Y and B-Y outputs
- With character display function
- Built-in contrast and saturation functions
- Flexible intercom system—two channels for producer/engineer and 4W or RTS or 2W selectable by internal switch
- Microphone gain (camera head) remote controllable
- Flickerless sequential mode (R/G/B) standard for WFM output
- Directly interfaces with MSU-700A/750, CNU-700/500 and RCP-700 series
- 19-inch rack mountable



### Applicable Models

BVP-900P 3-chip CCD Studio/OB Camera System  
 BVP-950P 3-chip CCD Studio/OB Camera  
 BVP-E30P 3-chip CCD Portable Color Camera  
 BVP-E30WSP 3-chip CCD Portable Color Camera

### Supplied Accessories

AC power cord (1)  
 Plug holder for the AC power cord (1)  
 4-pin connectors (1)  
 19-pin connectors (1)  
 Number plate (1)  
 Operation manual (1)  
 Maintenance manual (1)

### Optional Accessories

BKP-7900 Extension Board  
 BKP-7931 Sub Encoder Board  
 BKP-7311 SDI Output Board  
 BKP-7312 SDI Input Board  
 CCA-5 Cables 8-pin/8-pin Remote Control Cable  
 CA-570P Camera Adaptor

### Specifications

#### General

Power requirements:  
 AC 110 to 120/220 to 240V  $\pm$  10%, 50/60 Hz  
 Power consumption:  
 Max. 450 VA  
 Operating temperature:  
 0 to +45°C (+32 to +113° F)  
 Mass:  
 19 kg (41 lb 14 oz)  
 Dimensions:  
 424(W) x 133(H) x 400(D)mm  
 (16 3/4 x 5 1/4 x 15 3/4 inches)

#### Input signals

Return video 1, 2 in \*1(3, 4):  
 BNC, loop-through, 1.0 Vp-p, 75  $\Omega$   
 Reference input:  
 BNC, loop-through, VBS, 1.0 Vp-p, 75  $\Omega$   
 Prompter input:  
 BNC, loop-through, 1.0 Vp-p, 75  $\Omega$

#### Output signals

Encoded video output (BNC):  
 BNC (3), VBS, 1.0 Vp-p, 75  $\Omega$

#### Component SDI:

BNC (2, optional), 270 Mb/s

#### R/G/B output:

BNC, 700 mVp-p, 75  $\Omega$

#### Y/R-Y/B-Y output (BNC):

Y: 1.0 Vp-p (video:0.7, sync:0.3), 75  $\Omega$

R-Y: 0.525 Vp-p, 75  $\Omega$

B-Y: 0.525 Vp-p, 75  $\Omega$

#### Waveform monitor output:

BNC (2), 0.7 Vp-p, 75  $\Omega$

#### Picture monitor out (BNC):

BNC (2), 1.0Vp-p

#### Character video output:

Video:

BNC, 0.3 Vp-p

Sync:

BNC, 0.3 Vp-p

#### Sync output (analog BNC):

0.3 Vp-p, negative, 75  $\Omega$

#### Microphone output:

2-CH, XLR 3-pin, 0 dB/-20 dB selectable

#### Input/output signals

##### Camera

Triax:

Fischer type (1)

Coax:

BNC (1)

#### Communication

##### Intercom (RTS):

XLR-3-pin, loop-through

Intercom (4W/2W)/Tally/PGM:

19-pin

Intercom PGM (front panel):

XLR-5-pin

#### Remote control

Remote:

8-pin

AUX:

8-pin

#### Others

WF mode:

4-pin

Microphone gain remote control:

D-sub 15-pin

Intercom remote control:

D-sub 25-pin

## Camera Accessories/Peripherals

# CCU-790 Camera Control Unit

The CCU-790 is a full-size triax camera control unit for use with a CA-590 triax camera adaptor attached to a BVP-E30/E30WS series camera.

### Features

●Wideband transmission (10 MHz for Y and 4.5 MHz for R-Y/B-Y) ●Long-distance transmission - up to 2000 m via a 4.5 mm dia. cable ●Three SDI or analog composite outputs ●Up to three additional SDI outputs (\*) ●One component output (Y/R-Y/B-Y or G/R/B) ●Four inputs for return video (RET-1/2: analog ●composite, RET-3/4: SDI) ●Built-in Ethernet interface (100Base-T) for ●future use ●Teleprompter support ●Support for two-channel intercom systems ●(four-wire/RTS/Clearcom) ●Two-channel program audio ●Two-channel microphone system (two XLR ●connectors)

(\*) Available only when SDI out is selected for output 1.

### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera

### Supplied Accessories

AC power cord (1)  
AC power plug holder (1)  
4-pin connector (1)  
Number plate (1)  
Operation manual (1)

### Optional Accessories

CA-590 Camera Adaptor  
CCA-5 Cables 8-pin/8-pin Remote Control Cable

### Specifications

#### General

Power requirements  
AC 120 V, 50/60 Hz  
Operating temperature  
0 to +45 °C (+32 to +113 °F)

Dimensions (W x H x D)  
424 x 133 x 394 mm (16 3/4 x 5 1/4 x 15 5/8 inches)

Mass  
Approx. 12 kg (26 lb 7 oz)

#### Signal inputs

Reference  
BNC (loop-through), VBS/BS, 1.0 Vp-p, 75 Ω

Return (1, 2) (\*1)  
BNC(loop-through), VBS, 1.0 Vp-p, 75 Ω  
SDI return (3, 4)  
BNC, SDI/VBS selectable  
VBS: 1.0 Vp-p, 75 Ω, SDI: SMPTE 259M

Prompter (\*1)  
BNC (loop-through), VBS, 1.0 Vp-p, 75 Ω

#### Signal outputs

VBS/SDI  
BNC (x3), VBS/SDI selectable  
VBS: 1.0 Vp-p, 75 Ω, SDI: SMPTE 259M

SDI  
BNC (x3) (\*2)  
Analog component  
BNC (x3 for 1 set), Y/R-Y/B-Y or G/R/B switchable  
Y: 1.0 Vp-p, 75 Ω, R-Y/B-Y: 700 mVp-p, 75 Ω  
R/G/B: 700 mVp-p, 75 Ω

PIX  
BNC, 1.0 Vp-p, 75 Ω  
WF  
BNC, 1.0 Vp-p, 75 Ω, 714 mVp-p, 75 Ω  
WF mode  
4-pin  
Audio  
XLR-3-pin (x2), 0 dBu/-20 dBu, balanced  
Sync  
BNC, 0.3 Vp-p, 75 Ω

#### Camera input/output signals

Camera  
Triax  
Coax  
BNC, 75 Ω  
Remote  
8-pin  
Ethernet  
IEEE 802.3 10BASE-T, IEEE 802.3u  
100BASE-TX  
Intercome/tally/program  
D-sub 25-pin  
4W/RTS  
Tally: DC 24 V, TTL level or contact selectable  
Microphone remote  
D-sub 15-pin  
Intercom (front)  
XLR-5-pin

(\*1) The same signal is input to the RET-2 and the PROMPTER connectors. (\*2) Available only when SDI out is selected for output 1.

## Camera Accessories/Peripherals

# CCU-790P Camera Control Unit

The CCU-790P is a full-size triax camera control unit for use with a CA-590P triax camera adaptor attached to a BVP-E30P/E30WSP series camera.

### Features

- Wideband transmission (10 MHz for Y and 4.5 MHz for R-Y/B-Y)
- Long-distance transmission - up to 2000 m via a 4.5 mm dia. cable
- Three SDI or analog composite outputs
- Up to three additional SDI outputs (\*)
- One component output (Y/R-Y/B-Y or G/R/B)
- Four inputs for return video (RET-1/2: analog composite, RET-3/4: SDI)
- Built-in Ethernet interface (100Base-T) for future use
- Teleprompter support
- Support for two-channel intercom systems (four-wire/RTS/Clearcom)
- Two-channel program audio
- Two-channel microphone system (two XLR connectors)

(\*) Available only when SDI out is selected for output 1.

### Applicable Models

BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera

### Supplied Accessories

AC power cord (1)  
AC power plug holder (1)  
4-pin connector (1)  
Number plate (1)  
Operation manual (1)

### Optional Accessories

CA-590P Camera Adaptor  
CCA-5 Cables 8-pin/8-pin Remote Control Cable

### Specifications

#### General

Power requirements  
AC 110 to 120 V/220 to 240 V, 50/60 Hz  
Operating temperature  
0 to +45 °C (+32 to +113 °F)  
Dimensions (W x H x D)  
424 x 133 x 394 mm (16 3/4 x 5 1/4 x 15 5/8 inches)

#### Mass

Approx. 12 kg (26 lb 7 oz)

#### Signal inputs

##### Reference

BNC (loop-through), VBS/BS, 1.0 Vp-p, 75 Ω

Return (1, 2) (\*1)

BNC(loop-through), VBS, 1.0 Vp-p, 75 Ω

SDI return (3, 4)

BNC, SDI/VBS selectable

VBS: 1.0 Vp-p, 75 ΩSDI: SMPTE 259M

Prompter (\*1)

BNC (loop-through), VBS, 1.0 Vp-p, 75 Ω

#### Signal outputs

##### VBS/SDI

BNC (x3), VBS/SDI selectable

VBS: 1.0 Vp-p, 75 ΩSDI: SMPTE 259M

##### SDI

BNC (x3) (\*2)

##### Analog component

BNC (x3 for 1 set), Y/R-Y/B-Y or G/R/B switchable

Y: 1.0 Vp-p, 75 Ω, R-Y/B-Y: 525 mVp-p, 75 Ω

R/G/B: 700 mVp-p, 75 Ω

##### PIX

BNC, 1.0 Vp-p, 75 Ω

##### WF

BNC, 1.0 Vp-p, 75 Ω, 700 mVp-p, 75 Ω

##### WF mode

4-pin

##### Audio

XLR-3-pin (x2), 0 dBu/-20 dBu, balanced

##### Sync

BNC, 0.3 Vp-p, 75 Ω

#### Camera input/output signals

##### Camera

Triax

##### Coax

BNC, 75 Ω

##### Remote

8-pin

##### Ethernet

IEEE 802.3 10BASE-T, IEEE 802.3u

100BASE-TX

##### Intercome/tally/program

D-sub 25-pin

4W/RTS

Tally: DC 24 V, TTL level or contact

selectable

##### Microphone remote

D-sub 15-pin

##### Intercom (front)

XLR-5-pin

(\*1) The same signal is input to the RET-2 and the PROMPTER connectors. (\*2) Available only when SDI out is selected for output 1.

## Camera Accessories/Peripherals

### CCU-D50 Camera Control Unit

#### Features

- Interfaces with Sony DXC-D50/D35 Series digital cameras(\*1) via its associated CA-D50 Camera Adaptor
- The output of the CA-D50 Camera Adaptor is transferred to the CCU-D50 Camera Control Unit as a component digital SDI(\*2) signal via a Sony CCZ-A 26-pin cable up to 75 m long.
- The distance between the CA-D50 Camera Adaptor and CCU-D50 Camera Control Unit can be extended to a maximum 200 m by providing a separate low loss coaxial video cable to carry the SDI signal between the two units.
- Switchable to accept analog component/VBS signals from DVCAM camcorders (DSR-570WS/370) equipped with a 26-pin interface.
- Maximum cable length from the camcorder to the CCU-D50 in analog transfer mode is 300 m(\*3).
- Outputs analog composite and one of the following: component digital SDI, analog component (Y/R-Y/B-Y or RGB), or S-video(\*4).
- Flexible intercom connectivity allows the interfacing of 2-wire or 4-wire systems.
- Green tally indication included for use in mid to large-scale camera operations.
- The RCP-TX7 or the RM-M7G can be connected to the CCU-D50.

(\*1) Some DXC-D35 Series of digital cameras may require software upgrade to use the CCU-D50. (\*2) Embedded audio is not supported. (\*3) The distance between the camcorder and the CCU-D50 may vary depending on system requirements. (\*4) Available output signals depend on the connected camera or camcorder.



Camera Accessories/Peripherals

#### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera

#### Supplied Accessories

AC power cord (1)  
 Rack mount adaptor (2)  
 Rack mount screw (4)  
 Tally indication segment (1)  
 Operation manual (1)

#### Optional Accessories

RCP-TX7 Remote Control Panel  
 RM-M7G Remote Control Unit  
 CCZ-A Cables 26-pin/26-pin Cable  
 CCA-7 Cables 10-pin/10-pin Cable

#### Specifications

##### General

Power requirements:  
 AC 120 V, 50/60 Hz  
 Power consumption:  
 Approx. 1.7 A  
 Operating temperature:  
 5°C to 40°C (41°F to 104°F)  
 Storage temperature:  
 -20°C to 55°C (-4°F to 131°F)  
 Dimensions:  
 424 (W) × 88 (H) × 283 (D) mm  
 (16 3/4 × 3 1/2 × 11 1/4 inches)  
 Mass:  
 6.3 kg (13 lb 14 oz)

#### Input/Output connectors

VBS output:  
 BNC (2) 1.0 Vp-p, 75 Ω  
 R/G/B output:  
 BNC (1) 0.7 Vp-p, 75 Ω  
 Y/R-Y/B-Y output:  
 BNC (1), Y: 1.0 Vp-p, 75 Ω, R-Y/B-Y: 0.7 Vp-p, 75 Ω  
 Y/C output:  
 BNC (1) Y: 1.0 Vp-p, 75 Ω, C: 0.286 Vp-p, 75 Ω  
 SYNC output:  
 BNC (1), 0.3 Vp-p, 75 Ω  
 SDI output:  
 BNC (2), 270 Mb/s, 0.8 Vp-p, 75 Ω  
 S-Video output:  
 DIN 4-pin (1), Y: 1.0 Vp-p, 75 Ω, C: 0.286 Vp-p, 75 Ω  
 Monitor output:  
 BNC (1) VBS: 1.0Vp-p, 75 Ω  
 Mic output:  
 XLR 3-pin (1), 600 Ω  
 Genlock input:  
 BNC (1), loop-through, VBS or BBS, 1.0 Vp-p, 75 Ω  
 SDI input:  
 BNC (1), 270 Mb/s, 0.8 Vp-p, 75 Ω  
 Return Video input:  
 BNC (1), loop-through, 1.0 Vp-p, 75 Ω  
 Prompter Video input:  
 BNC (1), loop-through, 1.0 Vp-p, 75 Ω  
 Camera:  
 Sony Z-type 26-pin (1)  
 Intercom/Tally:  
 D-sub 15-pin, 4W/2W selectable, R/G Tally, contact  
 Remote:  
 10-pin (1)

#### Control functions

##### Control functions:

Iris (auto/manual), White Balance (auto/manual/preset), Black balance (auto/manual/preset), Gain select (low/mid/high), R/B White, R/B Black, Master Black, Sub-carrier Phase, Horizontal Phase, Output Mode (color bar/camera), Knee Point (auto/manual), Detail Level, Master Gamma, Tally/Intercom, Shutter Speed, Clear scan, ATW

## Camera Accessories/Peripherals

### CCU-D50P Camera Control Unit

#### Features

- Interfaces with Sony DXC-D50P/D35P Series digital cameras(\*1) via its associated CA-D50 Camera Adaptor.
- The output of the CA-D50 Camera Adaptor is transferred to the CCU-D50P Camera Control Unit as a component digital SDI(\*2) signal via a Sony CCZ-A 26-pin cable up to 75 m long.
- The distance between the CA-D50 Camera Adaptor and CCU-D50P Camera Control Unit can be extended to a maximum 200 m by providing a separate low loss coaxial video cable to carry the SDI signal between the two units.
- Switchable to accept analog component/VBS signals from DVCAM camcorders, DSR-570WSP/370P, equipped with a 26-pin interface.
- Maximum cable length from the camcorder to the CCU-D50P in analog transfer mode is 300 m(\*3).
- Outputs analog composite and one of the following: component digital SDI, analog component (Y/R-Y/B-Y or RGB), or S-video(\*4).
- Flexible intercom connectivity allows the interfacing of 2-wire or 4-wire systems.
- Green tally indication included for use in mid to large-scale camera operations.
- The RCP-TX7 or the RM-M7G can be connected to the CCU-D50P.

(\*1) Some DXC-D35P Series of digital cameras may require software upgrade to use the CCU-D50P. (\*2) Embedded audio is not supported. (\*3) The distance between the camcorder and the CCU-D50P may vary depending on system requirements. (\*4) Available output signals depend on the connected camera or camcorder.

#### Applicable Models

DXC-D50PH 3-chip CCD Portable Color Camera  
DXC-D50PK 3-chip CCD Portable Color Camera  
DXC-D50PL 3-chip CCD Portable Color Camera  
DXC-D50WSPL 3-chip CCD Portable Color Camera

#### Supplied Accessories

AC power cord (1)  
Rack mount adaptor (2)  
Rack mount screw (4)  
Tally indication segment (1)  
Operation manual (1)

#### Optional Accessories

RCP-TX7 Remote Control Panel  
RM-M7G Remote Control Unit  
CCZ-A Cables 26-pin/26-pin Cable  
CCA-7 Cables 10-pin/10-pin Cable

#### Specifications

##### General

Power requirements:  
AC 200/240 V, 50/60 Hz  
Power consumption:  
Approx. 0.8 A  
Operating temperature:  
5°C to 40°C (41°F to 104°F)  
Storage temperature:  
-20°C to 55°C (-4°F to 131°F)  
Dimensions:  
424 (W) × 88 (H) × 283 (D) mm  
(16 3/4 × 3 1/2 × 11 1/4 inches)  
Mass:  
6.3 kg (13 lb 14 oz)

##### Input/Output connectors

VBS output:  
BNC (2) 1.0 Vp-p, 75 Ω  
R/G/B output:  
BNC (1) 0.7 Vp-p, 75 Ω  
Y/R-Y/B-Y output:  
BNC (1), Y: 1.0 Vp-p, 75 Ω, R-Y/B-Y: 0.525 Vp-p, 75 Ω

##### Y/C output:

BNC (1) Y: 1.0 Vp-p, 75 Ω, C: 0.3 Vp-p, 75 Ω

##### SYNC output:

BNC (1), 0.3 Vp-p, 75 Ω

##### SDI output:

BNC (2), 270 Mb/s, 0.8 Vp-p, 75 Ω

##### S-Video output:

DIN 4-pin (1), Y: 1.0 Vp-p, 75 Ω, C: 0.3 Vp-p, 75 Ω

##### Monitor output:

BNC (1) VBS: 1.0 Vp-p, 75 Ω

##### Mic output:

XLR 3-pin (1), 600 Ω

##### Genlock input:

BNC (1), loop-through, VBS or BBS, 1.0 Vp-p, 75 Ω

##### SDI input:

BNC (1), 270 Mb/s, 0.8 Vp-p, 75 Ω

##### Return Video input:

BNC (1), loop-through, 1.0 Vp-p, 75 Ω

##### Prompter Video input:

BNC (1), loop-through, 1.0 Vp-p, 75 Ω

##### Camera:

Sony Z-type 26-pin (1)

##### Intercom/Tally:

D-sub 15-pin, 4W/2W selectable, R/G Tally, contact

##### Remote:

10-pin (1)

##### Control functions

Iris (auto/manual), White Balance (auto/manual/preset), Black balance (auto/manual/preset), Gain select (low/mid/high), R/B White, R/B Black, Master Black, Sub-carrier Phase, Horizontal Phase, Output Mode (color bar/camera), Knee Point (auto/manual), Detail Level, Master Gamma, Tally/Intercom, Shutter Speed, Clear scan, ATW



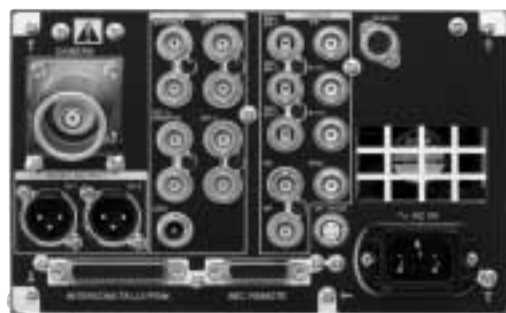
## Camera Accessories/Peripherals

### CCU-TX50 Camera Control Unit

The CCU-TX50 is a triax camera control unit for the DXC-D50 series portable camera.

#### Features

- Compact design - half rack width and 3U height
- High quality data transmission
- Long distance transmission - up to 1500 meters via  $\phi 14.5$  mm cable
- In addition to the component/RGB switchable output, three outputs switchable between composite video and SDI are provided.
- Component video output (selectable from Y/R-Y/B-Y and R/G/B)
- Three return video inputs (One inputs is shared with prompter input)
- Color teleprompter compatible
- Red/Green tally indication
- Support for major intercom systems (Four-wire/RTS/Clear-com)
- Program audio input
- Two-channel microphone outputs (two XLR connectors)



Camera Accessories/Peripherals

#### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera

#### Supplied Accessories

AC power cord (1)  
 AC power plug holder (1)  
 Plug holder for AC power cord (1)  
 Rack mount adaptor (2)  
 Rack mount screw (4)  
 Number plate (1)  
 Operation manual (1)

#### Optional Accessories

CA-TX50 Camera Adaptor  
 RCP-D50 Remote Control Panel (Joystick Type)  
 RCP-D51 Remote Control Panel (Dial Control Type)  
 RMM-301 Rack Mounting Bracket  
 CCA-7 Cables 10-pin/10-pin Cable

#### Specifications

##### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

130 VA (measured at maximum load at camera side 12 V, 4.8 A, cable length 300 m)

Peak inrush current

- (1) Power ON, current probe method: 50 A (240 V)
- (2) Hot switching inrush current, measured in accordance with European standard DN55103-1: 10 A (230 W)

Cable length:

Max. 750 m (8.5 mm dia.)

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

-20 °C to 55 °C (-4 °F to 131 °F)

Mass:

Approx. 5.5 kg (12 lb 2 oz)

Dimensions (W x H x D):

200 x 124 x 365 mm (8 x 5 x 13 7/8 inches)

##### Signal inputs

REFERENCE: BNC type, loop-through, VBS/BS, 1.0 Vp-p, 75  $\Omega$

RETURN VIDEO 1, 2, 3 (\*1): BNC type, loop-through, 1.0 Vp-p, 75  $\Omega$

PROMPTER VIDEO (\*1): BNC type, loop-through, 1.0 Vp-p, 75  $\Omega$

##### Signal outputs

VBS 1, 2, 3 (\*2): BNC type, 1.0 Vp-p, 75  $\Omega$

SDI 1, 2, 3 (\*2): BNC type, 270 Mb/s, 0.8 Vp-p, 75  $\Omega$

Y/R-Y/B-Y (\*3): BNC type, Y: 1.0 Vp-p, 75  $\Omega$ ,

R-Y/B-Y: 700 mVp-p, 75  $\Omega$

R/G/B (\*3): BNC type, 0.7 Vp-p, 75  $\Omega$

SYNC: BNC type, 0.3 Vp-p, 75  $\Omega$

PIX: BNC type, VBS, 1.0 Vp-p, 75  $\Omega$

WF: BNC type, 714 mVp-p, 75  $\Omega$

Encoded output: 1.0 Vp-p, 75  $\Omega$

WF MODE: 4-pin

AUDIO: XLR 3-pin, 0 dBu/-20 dBu, balanced, 2 channels

##### Camera control inputs/outputs

CAMERA: Triax (Kings type)

COAX: BNC type, 75  $\Omega$

REMOTE: 10-pin, multi connector

INTERCOM/TALLY/PGM: D-sub 25-pin, 4W/RTS/Clear-com selectable

TALLY: DC 24 V, TTL level or contact selectable

MIC REMOTE: D-sub 15-pin

INCOM (on the front panel): XLR 5-pin

(\*1) The same connector is shared for return-3 and teleprompter. (\*2) The same connector is shared for composite and SDI. (\*3) The same connector is shared for component and R/G/B.

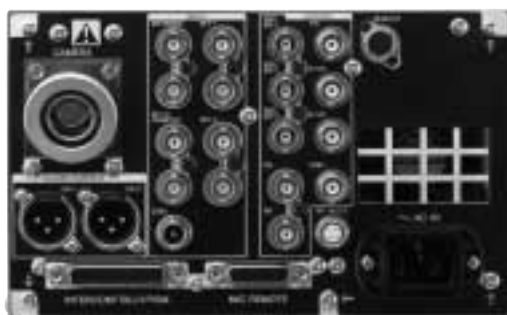
## Camera Accessories/Peripherals

### CCU-TX50P Camera Control Unit

The CCU-TX50P is a triax camera control unit for the DXC-D50P series portable camera.

#### Features

●Compact design - half rack width and 3U height ●High quality data transmission ●Long distance transmission - up to 1500 meters via  $\phi 14.5$  mm cable ●In addition to the component/RGB switchable output, three outputs switchable between composite video and SDI are provided ●Component video output (selectable from Y/R-Y/B-Y and R/G/B) ●Three return video inputs (One input is shared with prompter input) ●Color teleprompter compatible ●Red/Green tally indication ●Support for major intercom systems (Four-wire/RTS/Clear-com) ●Program audio input ●Two-channel microphone outputs (two XLR connectors)



#### Applicable Models

DXC-D50PH 3-chip CCD Portable Color Camera  
DXC-D50PK 3-chip CCD Portable Color Camera  
DXC-D50PL 3-chip CCD Portable Color Camera  
DXC-D50WSPL 3-chip CCD Portable Color Camera

#### Supplied Accessories

AC power cord (1)  
AC power plug holder (1)  
Plug holder for AC power cord (1)  
Rack mount adaptor (2)  
Rack mount screw (4)  
Number plate (1)  
Operation manual (1)

#### Optional Accessories

CCA-7 Cables 10-pin/10-pin Cable  
CA-TX50P Camera Adaptor  
RCP-D50 Remote Control Panel (Joystick Type)  
RCP-D51 Remote Control Panel (Dial Control Type)  
RMM-301 Rack Mounting Bracket

#### Specifications

##### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

130 VA (measured at maximum load at camera side 12 V, 4.8 A, cable length 300 m)

Peak inrush current

(1) Power ON, current probe method: 50 A (240 V)

(2) Hot switching inrush current, measured in accordance with European standard DN55103-1: 10 A (230 V)

Cable length:

Max. 750 m (8.5 mm dia.)

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

-20 °C to 55 °C (-4 °F to 131 °F)

Mass:

Approx. 5.5 kg (12 lb 2 oz)

Dimensions (W x H x D):

200 x 124 x 365 mm (8 x 5 x 13 7/8 inches)

#### Signal inputs

REFERENCE: BNC type, loop-through, VBS/BS, 1.0 Vp-p, 75  $\Omega$

RETURN VIDEO 1, 2, 3 (\*1): BNC type, loop-through, 1.0 Vp-p, 75  $\Omega$

PROMPTER VIDEO (\*1): BNC type, loop-through, 1.0 Vp-p, 75  $\Omega$

#### Signal outputs

VBS 1, 2, 3 (\*2): BNC type, 1.0 Vp-p, 75  $\Omega$

SDI 1, 2, 3 (\*2): BNC type, 270 Mb/s, 0.8 Vp-p, 75  $\Omega$

Y/R-Y/B-Y (\*3): BNC type, Y: 1.0 Vp-p, 75  $\Omega$ ,

R-Y/B-Y: 525 mVp-p, 75  $\Omega$

R/G/B (\*3): BNC type, 0.7 Vp-p, 75  $\Omega$

SYNC: BNC type, 0.3 Vp-p, 75  $\Omega$

PIX: BNC type, VBS, 1.0 Vp-p, 75  $\Omega$

WF: BNC type, 700 mVp-p, 75  $\Omega$

Encoded output: 1.0 Vp-p, 75  $\Omega$

WF MODE: 4-pin

AUDIO: XLR 3-pin, 0 dBu/-20 dBu, balanced, 2 channels

#### Camera control inputs/outputs

CAMERA: Triax (Fischer type)

COAX: BNC type, 75  $\Omega$

REMOTE: 10-pin, multi connector

INTERCOM/TALLY/PGM: D-sub 25-pin, 4W/RTS/Clear-com selectable

TALLY: DC 24 V, TTL level or contact selectable

MIC REMOTE: D-sub 15-pin

INCOM (on the front panel): XLR 5-pin

(\*1) The same connector is shared for return-3 and teleprompter. (\*2) The same connector is shared for composite and SDI. (\*3) The same connector is shared for component and R/G/B.

## Camera Accessories/Peripherals

### CMA-D2 Camera Adaptor

#### Features

- Supplies DC power with a CCDC cable to cameras
- Transmits DC power and video/sync signals between the camera and the adaptor with a CCMC 12-pin cable
- Maximum cable length: 100 m with CCDC-100A cable/25 m with CCMC-12P25 cable
- 19-inch EIA standard rack mountable



#### Applicable Models

DXC-390 3-CCD Color Video Camera  
DXC-990 3-CCD Color Video Camera  
DXC-LS1 CCD Color Video Camera  
DXC-LS1P CCD Color Video Camera

#### Supplied Accessories

AC power cord (1)  
Operation manual (1)

#### Specifications

##### Connectors:

CAMERA (12-pin MULTI)  
CAMERA (4-pin DIN)  
VIDEO OUT (BNC)  
S VIDEO OUT (Mini DIN 4-pin)  
GEN-LOCK IN (BNC)

##### DC out:

13 V, 1.3 A

##### Power requirements:

AC 120 V, 50/60 Hz

##### Power consumption:

23 W

##### Dimensions:

210 (W) × 50 (H) × 200 (D) mm  
(8 3/8 × 2 × 7 7/8 inches)

##### Mass:

1.1 kg (2 lb 7 oz)

### CMA-D2MD Camera Adaptor

#### Features

- Supplies DC power with a CCDC cable to cameras
- Transmits DC power and video/sync signals between the camera and the adaptor with a CCMC 12-pin cable
- Maximum cable length: 100 m with CCDC-100A cable/25 m with CCMC-12P25 cable
- 19-inch EIA standard rack mountable
- Complies with medical safety standard



#### Applicable Models

DXC-990 3-CCD Color Video Camera

#### Supplied Accessories

AC power cord (1)  
Operation manual (1)

#### Specifications

##### Connectors:

CAMERA (12-pin MULTI)  
CAMERA (4-pin DIN)  
VIDEO OUT (BNC)  
S VIDEO OUT (Mini DIN 4-pin)  
GEN-LOCK IN (BNC)

##### DC out:

13 V, 1.3 A

##### Power requirements:

AC 120 V, 50/60 Hz

##### Power consumption:

23 W

##### Dimensions:

210 (W) × 50 (H) × 200 (D) mm  
(8 3/8 × 2 × 7 7/8 inches)

##### Mass:

1.1 kg (2 lb 7 oz)

## Camera Accessories/Peripherals

### CMA-D2MDCE Camera Adaptor

#### Features

- Supplies DC power with a CCDC cable to cameras
- Transmits DC power and video/sync signals between the camera and the adaptor with a CCMC 12-pin cable
- Maximum cable length: 100 m with CCDC-100A cable/25 m with CCMC-12P25 cable
- 19-inch EIA standard rack mountable
- Complies with medical safety standard



#### Applicable Models

DXC-990P 3-CCD Color Video Camera

#### Supplied Accessories

AC power cord (1)

Operation manual (1)

#### Specifications

##### Connectors:

- CAMERA (12-pin MULTI)
- CAMERA (4-pin DIN)
- VIDEO OUT (BNC)
- S VIDEO OUT (Mini DIN 4-pin)
- GEN-LOCK IN (BNC)

##### DC out:

13 V, 1.3 A

##### Power requirements:

AC 100 to 240 V, 50/60 Hz

##### Power consumption:

24.5 W

##### Dimensions:

210 (W) × 50 (H) × 200 (D) mm  
(8 3/8 × 2 × 7 7/8 inches)

##### Mass:

1.1 kg (2 lb 7 oz)

### CMA-D3 Camera Adaptor

#### Features

- Supplies DC power and transmits video/sync signal between the adaptor and the DXC-390 with CCZ-A cable and CCMC-3MZ cable
- Connects with optional RM-C950 remote control unit
- AC IN/DC IN

#### Applicable Models

DXC-390 3-CCD Color Video Camera

DXC-990 3-CCD Color Video Camera

#### Supplied Accessories

Operation manual (1)

AC cable (1)

#### Specifications

##### Connectors:

- CAMERA (26-pin MULTI)
- VIDEO OUT (BNC)
- SYNC IN / OUT (BNC)
- TRIG INPUT (BNC)
- W.E PULSE OUTPUT (BNC)
- REMOTE (mini DIN 8 pin)

##### Power requirements:

AC 100-240V or DC  
(10.5 to 15.0V)

##### Dimensions:

210(W) × 44(H) × 210(D) mm  
(8 3/8 × 1 3/4 × 8 3/8 inches)



## Camera Accessories/Peripherals

### CMA-D3CE Camera Adaptor

#### Features

- Supplies DC power and transmits video/sync signal between the adaptor and the DXC-390P with CCZ-A cable and CCMC-3MZ cable
- Connects with optional RM-C950 remote control unit
- AC IN/DC IN

#### Applicable Models

DXC-390P 3-CCD Color Video Camera

DXC-990P 3-CCD Color Video Camera

#### Supplied Accessories

Operation manual (1)

AC cable (1)

#### Specifications

##### Connectors

CAMERA (26-pin MULTI)

VIDEO OUT (BNC)

SYNC IN / OUT (BNC)

TRIG INPUT (BNC)

W. E OUTPUT (BNC)

REMOTE (mini DIN 8 pin)

##### Power requirements:

AC 100-240 V or

DC (10.5 to 15.0 V)

##### Dimensions:

210 (W) × 44 (H) × 210 (D) mm



## Camera Accessories/Peripherals

# CNU-700 Camera Command Network Unit

### Features

- High-speed data transmission rates — more than 500 kb/s between CNU and MSU/RCP/CCU and 35 kb/s between camera head and CCU
- Expandable system configuration — up to 12 cameras with one CNU-700 and one BKP-7930 installed
- Character display function in monochrome
- Bypass facility to maintain communication between the CCUs and RCPs in the event of a CNU malfunction or power loss

### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
 BVP-E30P 3-chip CCD Portable Color Camera  
 BVP-E30WS 3-chip CCD Portable Color Camera  
 BVP-E30WSP 3-chip CCD Portable Color Camera  
 HDC1000 Multi-format HD Camera

### Supplied Accessories

AC power cord (1)  
 Plug holder for the AC power cord (1)  
 Operation manual (1)  
 Maintenance manual (1)

### Optional Accessories

BKP-7932 Camera Adaptor Modification Unit  
 CCA-5 Cables 8-pin/8-pin Remote Control Cable

### Optional Boards

BKP-7900 Extension Board  
 BKP-7930 Expansion Board  
 BKP-7933 S-Bus Interface Board

### Specifications

#### General

##### Power requirements:

AC 100 to 120 V, 50/60 Hz (For USA and Canada)  
 AC 220 to 240 V, 50/60 Hz (For other countries)

##### Power consumption:

4.0 VA max.

##### Operating temperature:

0 to +45 °C (+32 to +113 °F)

##### Mass:

9.5 kg (20 lb 15 oz)

##### Dimensions:

424(W) x 132(H) x 400(D) mm  
 (16 3/4 x 5 1/4 x 15 3/4 inches)

#### Input/output connectors

##### CCU 1 through 6:

8-pin multiconnector (1 each)

##### RCP 1 through 6:

8-pin multiconnector (1 each)

##### MSU:

8-pin multiconnector (1)

##### VCS:

8-pin multiconnector (1)

##### AUX 1 and 2:

8-pin multiconnector (1 each)

##### Character:

BNC type (2) video: 0.7 Vp-p, sync: 0.3 Vp-p

##### Reference:

BNC type (2) 0.3 Vp-p with loop-through output

##### RS-232C:

D-sub 9-pin (3)

##### AC input:

3-pin (1)



## Camera Accessories/Peripherals

### DR-100 Intercommunication Headset

#### Features

- With mini type 4-pole plug

#### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50PH 3-chip CCD Portable Color Camera  
 DXC-D50PK 3-chip CCD Portable Color Camera  
 DXC-D50PL 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 DXC-D50WSPL 3-chip CCD Portable Color Camera

#### Specifications

Mass:

105 g (3.7 oz)



Camera Accessories/Peripherals

### DXBK-701 SDI Output Board

SDI output board for the CCU-TX7/TX7P

#### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50PH 3-chip CCD Portable Color Camera  
 DXC-D50PK 3-chip CCD Portable Color Camera  
 DXC-D50PL 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 DXC-D50WSPL 3-chip CCD Portable Color Camera

#### Specifications

Power consumption:

4.5 W

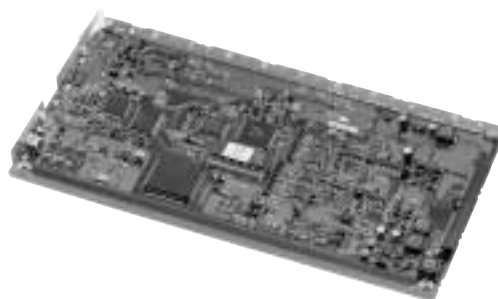
Dimensions (w/h/d):

17 × 148 × 227 mm

(11/16 × 5 7/8 × 11 inches)

Mass:

330 g (11.6 oz)



Camera Accessories/Peripherals

DXF-51 5-inch Monochrome Viewfinder

Features

- High horizontal resolution of 650 TV lines ●Stable video image ●Bright and clear color image ●Under Scanning capability ●Can operate either on EIA and CCIR signals systems with automatic selection ●16:9/4:3 Automatic Aspect Ratio Selection ●Automatic switching of viewfinder's aspect ratio between 16:9 and 4:3 ●Two red REC tally lamps ●Green Tally Lamp which can be used as a second tally lamp for CCU operations ●20-pin connector ●DIN 8-pin connector ●+/- 40 degrees of tilting is possible ●+/- 90 degrees of panning is possible ●Rugged and compact body



Applicable Models

- CA-TX50 Camera Adaptor
- CA-TX50P Camera Adaptor
- DSR-400K DVCAM Camcorder
- DSR-400L DVCAM Camcorder
- DSR-400PK DVCAM Camcorder
- DSR-400PL DVCAM Camcorder
- DSR-450WSL DVCAM Camcorder
- DSR-450WSPL DVCAM Camcorder
- DXC-D50H 3-chip CCD Portable Color Camera
- DXC-D50K 3-chip CCD Portable Color Camera
- DXC-D50L 3-chip CCD Portable Color Camera
- DXC-D50PH 3-chip CCD Portable Color Camera
- DXC-D50PK 3-chip CCD Portable Color Camera
- DXC-D50PL 3-chip CCD Portable Color Camera
- DXC-D50WSH 3-chip CCD Portable Color Camera

- DXC-D50WSL 3-chip CCD Portable Color Camera
- DXC-D50WSPL 3-chip CCD Portable Color Camera

Supplied Accessories

- Hood (1)
- Operation manual (1)
- 20-pin Cable (1)

Specifications

- Picture tube:
  - 5-inch monochrome, 70° deflection
- Scanning system:
  - 2:1 interlace, 625/50 or 525/59.94 switchable
- Horizontal resolution:
  - 650 TV lines (center)
- Camera connector:
  - 20-pin or DIN 8-pin connector

- Power requirements:
  - DC 12 V +5.0/-1.5 V (supplied from a camera)
- Power consumption:
  - 11 W
- Operating temperature:
  - 0°C to 40°C (32°F to 104°F)
- Mass:
  - 2.4 kg (5 lb 5 oz) with stand and hood
- Dimensions:
  - 202 (H) × 199 (W) × 217 (D) mm
  - (8 × 7 7/8 × 8 5/8 inches)
- including projecting parts and controls
  - 202 (H) × 199 (W) × 289 (D) mm
  - (8 × 7 7/8 × 11 1/2 inches)
- with stand and hood

## Camera Accessories/Peripherals

### HDCU1000 Camera Control Unit

The HDCU1000 is a full-size camera control unit for use with the HDC1000/HDC1500 camera. The optical fiber transmission system used in the unit maintains the high picture quality of the camera across cable runs of up to 3000 meters (9800 feet). The HDCU1000 is equipped with a range of built-in interfaces such as HD-SDI/SD-SDI outputs, HD/SD return inputs, and a down-converted analog composite monitor output. In addition, a variety of output interfaces are offered via optional boards, which are installed in the four slots of the HDCU1000. Furthermore, the Ethernet interface (100Base-T) that is built into the HDCU1000 allows the camera to be controlled over a network.



#### Features

- Eight HD-SDI or SD-SDI outputs
- Up to eight additional HD-SDI or SD-SDI outputs (with two optional HKCU1005 boards)
- Four sets of HD-SDI, SD-SDI, and analog composite return video inputs
- Built-in down-converted analog composite output
- Two-channel teleprompter input
- Built-in Ethernet interface (100Base-T)
- Utility power output capability for use with the HDC1000 or HDLA1500
- Two-channel data trunk lines (RS-422A or RS-232C) for easy data transmission
- AES/EBU digital audio output
- Two-channel microphone output (two XLR connectors)

#### Applicable Models

HDC1000 Multi-format HD Camera  
HDC1500 Multi-format HD Camera

#### Optional Accessories

HKCU1001 SD Analog Interface Unit  
HKCU1003 Multi Interface Unit  
HKCU1005 HD/SD Expansion Unit  
RCP-700 Remote Control Panel (Joystick Type)  
RCP-701 Remote Control Panel (Dial Control Type)  
RCP-750 Remote Control Panel (Joystick type)  
RCP-751 Remote Control Panel (Dial control type)  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit  
RM-B150 Remote Control Unit  
RM-B750 Remote Control Unit  
CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power requirements  
AC 100/120/220 to 240 V, 50/60 Hz  
Maximum current consumption  
5.4 A (at 100 V AC, entire system active)  
Operating temperature  
+5 to +40 °C (+41 to +104 °F)  
Mass  
Approx. 16 kg (35 lb 4 oz)  
Dimensions (W x H x D)  
424 x 133 x 410 mm (16 3/4 x 5 1/4 x 16 1/4 inches)

##### HD inputs/outputs

HD SDI output (\*1)  
BNC type (4), SMPTE 292M, 1080/50i, 60i, 30P, 25P, 24P, 720/60P, 50PHD SDI/SD SDI selectable  
HD monitor output (\*2)  
BNC type (4), SMPTE 292M, 1080/50i, 60i, 30P, 25P, 24P, 720/60P, 50PHD SDI/SD SDI selectable, character on/off selectable

##### HD SDI return input

BNC type (4), SMPTE 292M, 1080/50i, 60i, 30P, 25P, 24P, 720/60P, 50P

##### SD inputs/outputs

SDI output (\*1)  
BNC type (4), SMPTE 259M, Serial digital component  
HD SDI/SD SDI selectable  
SDI monitor output (\*2)  
BNC type (4), SMPTE 259M, Serial digital component, 480/576-lines  
HD SDI/SD SDI selectable, character on/off selectable

##### Analog composite monitor output

BNC type (1), character on/off selectable

##### SDI return input

BNC type (4), SMPTE 259M, Serial digital component

##### VBS return input

BNC type (4), NTSC/PAL

##### Sync

Reference input  
BNC type (1, with loop-through), HD tri-level sync or SD black burst

##### Sync output

BNC type (1), HD tri-level sync or SD sync

##### Intercom/Tally/PGM

Intercom PD & ENG  
D-sub 25-pin (1), 4W/RTS/CC selectable  
PGM1/PGM2  
0/-20 dBu selectable  
R-Tally/G-Tally  
24 V power in/make contact

##### Audio

MIC1/MIC2 output  
XLR-3-31 type (2, female), 0/-20 dBu selectable  
Digital audio output (AES/EBU)  
BNC type (1), AES/EBU format, 20-bit/48 kHz  
Embedded audio  
Embedded audio to HD SDI/SD SDI

##### Prompter

Prompter in  
BNC type (2, with loop-through), Analog, NTSC/PAL/HD-Y

##### Others

RCP/MSU/CNU interface  
8-pin (1), Sony Camera Command Network Protocol (for entire camera system control)  
Ethernet  
RJ-45 (1), 10BASE-T/100BASE-TX  
Mic remote  
D-sub 15-pin  
WF mode  
4-pin (2), Stair step (for SD composite Waveform monitor)  
WF control  
D-sub 15-pin (1), GPI (for SDI component WF control)  
System expansion I/O  
D-sub 15-pin (1), GPI (for system control with external GPI interface)  
Trunk line  
D-sub 9-pin (1), RS-232C (remote line for CHU equipment), 12-pin (round type connector), RS-232C/422 (remote line for CHU equipment)

##### Camera

Optical fiber cable interface  
SMPTE 304M based optical fiber connector (1), 1.5 gb/s optical fiber digital transmission, SMPTE 292 M

(\*1) HD SDI output and SD SDI output share the same connector. (\*2) HD monitor output and SD monitor output share the same connector.

## Camera Accessories/Peripherals

### HDCU1500 Camera Control Unit

The HDCU1500 is a half-rack size portable camera control unit for use with the HDC1000/HDC1500 camera. The optical fiber transmission system used in the unit maintains the high picture quality of the camera across cable runs of up to 1800 meters (5900 feet). The HDCU1500 is equipped with a range of built-in interfaces such as HD-SDI/SD-SDI outputs, HD/SD return inputs, and a down-converted analog composite monitor output. In addition, a variety of output interfaces are offered via optional boards, which are installed in the two slots of the HDCU1500. Furthermore, the Ethernet interface (100Base-T) that is built into the HDCU1500 allows the camera to be controlled over a network.



#### Features

- High power supply capability allowing HDC1000 camera or HDC1500/HDLA1500 operation
- Three HD-SDI or SD-SDI outputs
- Up to eight additional HD-SDI or SD-SDI outputs (requires two optional HKCU1005 boards)
- Three HD-SDI, SD-SDI, or analog composite return video inputs
- Built-in down-converted analog composite output
- RM-B750 Remote Control Unit attach capability on the front panel
- One channel teleprompter input
- Built-in Ethernet interface (100Base-T)
- Two-channel data trunk line(RS-422A/RS-232C) for easy data transmission
- Two-channel microphone output (two XLR connectors)

#### Applicable Models

HDC1000 Multi-format HD Camera  
HDC1500 Multi-format HD Camera

#### Optional Accessories

HKCU1001 SD Analog Interface Unit  
HKCU1003 Multi Interface Unit  
HKCU1005 HD/SD Expansion Unit  
RCP-700 Remote Control Panel (Joystick Type)  
RCP-701 Remote Control Panel (Dial Control Type)  
RCP-750 Remote Control Panel (Joystick type)  
RCP-751 Remote Control Panel (Dial control type)  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit  
RM-B150 Remote Control Unit  
RM-B750 Remote Control Unit  
CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power requirements  
AC 100 to 240 V, 50/60 Hz  
Maximum current consumption  
4 A (at 100 V AC, entire system active)  
Operating temperature  
-10 to +40 °C (+14 to +104 °F)  
Mass  
Approx. 6.2 kg (13 lb 10 oz)  
Dimensions (W x H x D)  
200 x 127 x 410 mm (8 x 5 1/9 x 16 1/4 inches)

##### HD inputs/outputs

HD SDI output (\*1)  
BNC type (2), SMPTE 292M, 1080/50i, 60i, 30P, 25P, 24P, 720/60P, 50PHD SDI/SDI selectable  
HD monitor output (\*2)  
BNC type (1), SMPTE 292M, 1080/50i, 60i, 30P, 25P, 24P, 720/60P, 50PHD SDI/SD SDI selectable

##### HD SDI return input

BNC type (3), SMPTE 292M, 1080/50i, 60i, 30P, 25P, 24P, 720/60P, 50PHD SDI/SD SDI/VBS selectable

##### SD inputs/outputs

SDI output (\*1)  
BNC type (2), SMPTE 259M, Serial digital componentHD SDI/SD SDI selectable

##### SDI monitor output (\*2)

BNC type (1), SMPTE 259M, Serial digital component, 480/576-linesHD SDI/SD SDI selectable

##### Analog composite monitor output

BNC type (1), Monitor/Sync selectable, character on/off selectable

##### SDI return input

BNC type (3), SMPTE 259M, Serial digital componentHD SDI/SD SDI/VBS selectable

##### VBS return input

BNC type (3), NTSC/PALHD SDI/SD SDI/VBS selectable

##### Sync

##### Reference input

BNC type (1, with loop-through), HD tri-level sync or SD black burst

##### Sync output

BNC type (1), HD tri-level sync or SD syncSync/Monitor selectable

##### Intercom/Tally/PGM

Intercom PD & ENG  
D-sub 25-pin (1), 4W/RTS/CC selectable  
PGM1/PGM2  
0/-20 dBu selectable  
R-Tally/G-Tally

##### R-Tally/G-Tally

24 V power in/make contact

##### Audio

MIC1/MIC2 output  
XLR-3-31 type (2, female), 0/-20 dBu selectable

##### Digital audio output (AES/EBU)

—

##### Embedded audio

Embedded audio to HD SDI/SD SDI

##### Prompter

##### Prompter in

BNC type (1, with loop-through), Analog, NTSC/PAL/HD-Y

##### Others

##### RCP/MSU/CNU interface

8-pin (1), Sony Camera Command Network Protocol (for entire camera system control)

##### Ethernet

RJ-45 (1), 10BASE-T/100BASE-TX

##### Mic remote

D-sub 15-pin

##### WF mode

4-pin (1), Stair step (for SD composite Waveform monitor)

##### WF control

D-sub 15-pin (1), GPI (for SDI component WF control)WF control/mic remote selectable

##### System expansion I/O

—

##### Trunk line

12-pin (round type connector), RS-232C/422 (remote line for CHU equipment)

##### Camera

##### Optical fiber cable interface

SMPTE 304M based optical fiber connector (1), 1.5 gb/s optical fiber digital transmission, SMPTE 292 M

(\*1) HD SDI output and SD SDI output share the same connector. (\*2) HD monitor output and SD monitor output share the same connector.

## Camera Accessories/Peripherals

# HDCU-900 Camera Control Unit

### Features

- Used to control the high definition HDC-900/910 studio camera or HDC-950/930 companion camera
- Full digital processing
- Connects to the camera head via optical fiber transmission to provide a transmission distance of up to 3 km while maintaining extremely high quality
- Four sets each of HD SDI SMPTE-292M signal inputs and VF returns, four sets of down-converted SDI SMPTE-259M outputs and four sets of up-converted V/F returns
- Down conversion from 1080 line to 480/576 line and vice versa with HKCU-901 SD Encoder Unit
- Frame rate conversion from 1080/24P to 1080/60i (3:2 pull-down) using the optional HKCU-903 Frame Rate Converter
- Line conversion to 720/60P using the optional HKCU-904 Line converter
- HD analog outputs and inputs (SMPTE-240M) available with the optional HKCU-902 Analog Interface Board
- Can be used with the existing MSU-700A/750, RCP-700 series and CNU-500/700



Camera Accessories/Peripherals

### Applicable Models

HDC-900 Multi-format HD Camera  
HDC-950 Multi-format HD Camera

### Supplied Accessories

AC power cord (1)  
Power cord plug holder (1)  
2-pin/3-pin transformer AC plug (1)  
4-pin connector (1)  
Number plates (1)  
Fuses (1)  
Operation manual (1)  
Maintenance manual Part 1 (1)

### Optional Accessories

HKCU-901 SD Encoder Board  
HKCU-902 HD Analog Interface Board  
HKCU-903 HD Frame Converter Board  
HKCU-904 Line Converter Board  
CCA-5 Cables 8-pin/8-pin Remote Control Cable  
BKP-7900 Extension Board

### Specifications

#### General

Power supply:  
100/110 to 120/220 to 240 V AC, 50/60 Hz  
Current consumption:  
5.4 A (at 100 V AC, entire system active)  
Peak inrush current:  
(1) Power ON, current probe method: 80 A (240 V), 80 A (100 V)  
(2) Hot switching inrush current, measured in accordance with European standard EN 55103 - 1: 10 A (230 V)  
Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)  
Storage temperature:  
- 20 °C to 60 °C (-4 °F to 140 °F)  
Mass:  
Approx. 20 kg (44 lb 4 oz)  
Dimensions:  
481 x 133 x 460 mm (W/H/D) (19 x 5 1/4 x 18 1/8 inch)

#### Input/Output connectors

Camera:  
Optical fiber connector x 1  
1.485 Gb/s/1.4835 Gb/s SDI x 2, 240 V AC power supply

#### Incom/Tally/PGM:

D-sub 25-pin x 1  
Incom - 4W, 2 system (PD/ENG), 0 dB  
PGM, 2 systems, 0/- 20 dB  
Tally (R,G)

#### RCP/CNU Remote:

8-pin multi-connector x 1

#### Trunk Line:

D-sub 9-pin female x 1 RS-232C, for CHU transmission or system expansion

#### I/O Port:

D-sub 15-pin female x 1 (JAE-made DA-C1-J10 recommended)

#### Input connectors

AC IN:  
100/110 to 120, 220 to 240 V AC switchable

#### HD SERIAL RET INPUT:

BNC type x 4, SMPTE-292M, Bit rate: 1.485 Gb/s/1.4835 Gb/s

#### SD SERIAL RET INPUT:

BNC type x 4, SMPTE-259M, Bit rate: 270 Mb/s

#### REFERENCE INPUT:

BNC type x 2, loop-through output  
HD: SMPTE-274M, tri-level sync, 0.6 Vp-p 75 Ω  
SD: Black burst (or 10F-BB), 0.286 Vp-p, 75 Ω

#### PROMPT IN:

BNC type x 2, loop-through output, analog signal, 1.0 Vp-p, 75 Ω

#### MIC REMOTE:

D-sub 15-pin x 1 (JAE-made DA-C1-J10 recommended)

#### Output connectors

MIC OUT:  
XLR 3-pin, male x 2, 0 dBs/- 20 dBs

#### DIGITAL AUDIO OUT:

BNC type x 1, AES/EBU format

#### CHARACTER OUT:

BNC type x 1, 525/625 black and white

#### WF REMOTE:

D-sub 15-pin, female x 1 (JAE-made DA-C1-J10 recommended)

#### HD SERIAL OUTPUT:

BNC type x 3, SMPTE-292M, 0.8 Vp-p 75 Ω, Bit rate: 1.485 Gb/s/1.4835 Gb/s

#### HD SERIAL MONI OUTPUT:

BNC type x 1, SMPTE-292M, 0.8 Vp-p 75 Ω, Bit rate: 1.485 Gb/s/1.4835 Gb/s

#### SD SERIAL OUTPUT:

BNC type x 4, SMPTE-259M, 0.8 Vp-p 75 Ω, Bit rate: 270 Mb/s

#### SYNC OUT:

BNC type x 1  
HD: BTA S001A, tri-level sync, 0.6 Vp-p 75 Ω  
SD: composite sync 0.3 Vp-p, 75 Ω

#### PIX OUT:

BNC type x 1, VBS/R/G/B (VBS 1 Vp-p, 75 Ω)

#### WF OUT:

BNC type x 1, VBS/R/G/B (VBS 1 Vp-p, 75 Ω)

#### WF MODE:

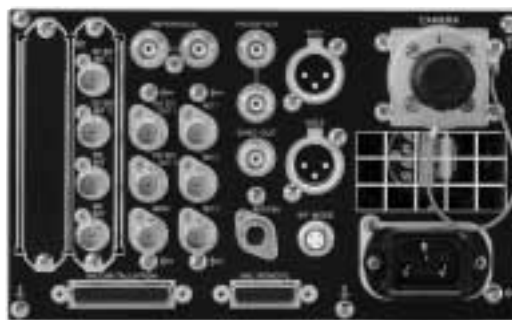
4-pin x 1

## Camera Accessories/Peripherals

### HDCU-950 Camera Control Unit

#### Features

- Intended for mobile but provides controllability almost equivalent to HDCU-900\*Half rack size
- Used to control the high definition HDC-950/930 companion camera
- Full digital processing
- Connects to the camera head via optical fiber transmission to provide a transmission distance of up to 1.2 km while maintaining extremely high quality
- Three sets each of HD SDI SMPTE-292M signal inputs and VF returns, three sets of down-converted SDI SMPTE-259M outputs and three sets of up-converted V/F returns\*Down conversion from 1080 line to 480/576 line and vice versa with HKCU-951 SD Encoder Unit
- Frame rate conversion from 1080/24P to 1080/60i (3:2 pull-down) using the optional HKCU-953 Frame Rate Converter
- Can be used with the existing MSU-700A/750, RCP-700 series and CNU-500/700



#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power supply:

AC 90 to 260 V, 50 Hz/60 Hz

Current consumption:

3 A (at 100 V AC, entire system active)

Operational temperature:

-10 °C to +40 °C (+41°F to +104°F)

Storage temperature:

-20 °C to +60 °C (-4°F to +140°F)

Dimensions (Approx. W x H x D):

200 x 127 x 410 mm (8 x 5 1/9 x 16 1/4 inches)

Mass (Approx.):

6.5 kg

##### HD input/output

HD SDI output:

BNC type (x 2), SMPTE 292M, 1080/50i, 60i, 30P, 25P, 24P

HD monitor out:

BNC type (x 1), 1080/50i, 60i, 30P, 25P, 24P

##### SD output

SD SDI output:

BNC type (x 2), SMPTE 259M, Serial digital component, 480/576-lines

SD analog monitor out:

BNC type, WF (x 1), PIX (x 1), 480/576-lines

##### Return inputs

HD SDI/SD SDI/analog VBS return input:

BNC type (x 3), HD/SD/Analog VBS selectable

##### Sync

Reference input:

BNC type (x 1, with loop-through), HD tri-level sync or SD Black Burst

Sync output:

BNC type (x1), HD tri-level sync or SD sync

##### Intercom/Tally/PGM

Intercom PD & ENG:

D-sub 25-pin (x 1), 4W/RTS/CC selectable

PGM1/PGM2:

0/-20 dBu selectable

R-Tally/G-Tally:

24 V power in /make contact

##### Audio

MIC1/MIC2 output:

XLR-3-31 type (Female x 2), 0/-20 dBu selectable

##### Prompter

Prompter in:

BNC type (x 1, with loop-through), Analog, NTSC/PAL/HD-Y

##### Others

RCP/MSU/CNU interface:

8-pin (x 1), Sony Camera Command Network Protocol (for entire camera system control)

WF mode:

4-pin, Stair step (for SD composite Waveform monitor)

MIC REMOTE (WF control):

D-sub 15-pin (x 1), GPI (for SDI component WF control)

##### Camera

Optical fiber cable interface:

SMPTE 304M based optical fiber connector (x 1) 1.5 Gb/s optical fiber digital transmission, SMPTE 292M, AC 240 V

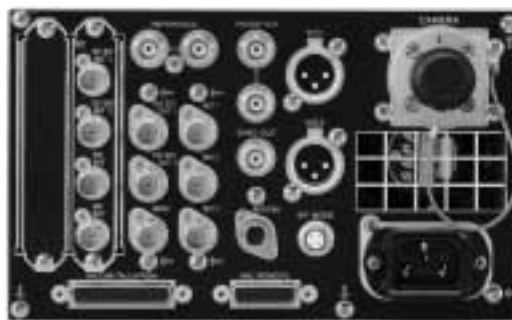
## Camera Accessories/Peripherals

### HDCU-F950 Camera Control Unit

The HDCU-F950 is the half rack size camera control unit that has been designed to support the HDC-F950 camera by providing full camera control capability both in fixed environments and for mobile use. The HDCU-F950 not only accepts the full-bandwidth R, G and B signals that are digitally transmitted from the HDC-F950 camera via a single optical fiber cable but also simultaneously transmit a variety of camera control signals and 4:2:2 return HD video signals as well as power to the camera.

#### Features

- Half rack size
- Used to control the HDC-F950 Digital 4:4:4 HD camera
- Full digital processing
- Connects to the camera head via optical fiber transmission
- Provides three R, G and B signals as two sets of Dual-Link HD-SDI outputs
- Two 4:2:2 HD-SDI outputs, two 4:2:2 HD-SDI return inputs and one GPI port.



#### Applicable Models

HDC-F950 Digital 4:4:4 HD Camera System

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power supply:

AC 90 to 260 V, 50 Hz/60 Hz

Current consumption:

3 A (at 100 V AC, entire system active)

Operational temperature:

-10 °C to +40 °C (+41°F to +104°F)

Storage temperature:

-20 °C to +60 °C (-4°F to +140°F)

Dimensions (Approx. W x H x D):

200 x 127 x 410 mm (8 x 5 1/9 x 16 1/4 inches)

Mass (Approx.):

6.5 kg

##### HD inputs/outputs

Dual Link HD SDI out (RGB 4:4:4):

BNC type (Link-A x 2, Link-B x 2), 1080/50i, 60i, 30P, 25P, 24P

HD SDI output (4:2:2):

BNC type (x 2), 1080/50i, 60i, 30P, 25P, 24P

##### Return inputs

HD SDI/SD SDI/analog VBS return input:

BNC type (x 3), HD/SD/Analog VBS selectable

##### Sync

Reference input:

BNC type (x 1, with loop-through), HD tri-level sync or SD Black Burst

Sync output:

BNC type (x1), HD tri-level sync or SD sync

##### Intercom/Tally/PGM

Intercom PD & ENG:

D-sub 25-pin (x 1), 4W/RTS/CC selectable

PGM1/PGM2:

0/-20 dBu selectable

R-Tally/G-Tally:

24 V power in /make contact

##### Audio

MIC1/MIC2 output:

XLR-3-31 type (Female x 2), 0/-20 dBu selectable

##### Prompter

Prompter in:

BNC type (x 1, with loop-through), Analog, NTSC/PAL/HD-Y

##### Others

RCP/MSU/CNU interface:

8-pin (x 1), Sony Camera Command Network Protocol (for entire camera system control)

WF mode:

4-pin, Stair step (for SD composite Waveform monitor)

MIC REMOTE (WF control):

D-sub 15-pin (x 1), GPI (for SDI component WF control)

##### Camera

Optical fiber cable interface:

SMPTE 304M based optical fiber connector (x 1) 1.5 Gb/s optical fiber digital transmission, SMPTE 292M, AC 240 V

## Camera Accessories/Peripherals

### HDFX100 HD Triax Adaptor (Kings type)

The HDTX100 and HDFX100 HD Triax Adaptors extensively expand applications of the HDC1000/HDC1500. By converting optical fiber transmission to the widely used triax transmission system, they enable high-quality pictures to be transmitted from the HDC1000 or HDC1500 camera or HDC1500 mounted on the HDLA1500 over long distances - up to 1400 m (4500 feet) with a 14.5 mm dia. triax cable or 1000 m (3200 feet) with a 13.2 mm dia. triax cable.

#### Features

- Converts optical fiber transmission to the widely used triax transmission system
- Long distance transmission - up to 1400 m (4500 feet) with a 14.5 mm dia. triax cable or 1000 m (3200 feet) with a 13.2 mm dia. triax cable

#### Optional Accessories

HDTX100 HD Triax Adaptor (Kings type)



## Camera Accessories/Peripherals

### HDFX100 HD Triax Adaptor (Fischer type)

The HDTX100 and HDFX100 HD Triax Adaptors extensively expand applications of the HDC1000/HDC1500. By converting optical fiber transmission to the widely used triax transmission system, they enable high-quality pictures to be transmitted from the HDC1000 or HDC1500 camera or HDC1500 mounted on the HDLA1500 over long distances - up to 1400 m (4500 feet) with a 14.5 mm dia. triax cable or 1000 m (3200 feet) with a 13.2 mm dia. triax cable.

#### Features

- Converts optical fiber transmission to the widely used triax transmission system
- Long distance transmission - up to 1400 m (4500 feet) with a 14.5 mm dia. triax cable or 1000 m (3200 feet) with a 13.2 mm dia. triax cable

#### Optional Accessories

HDTX100 HD Triax Adaptor (Fischer type)



## Camera Accessories/Peripherals

### HDLA1500 Large Lens Adaptor (CE)

The HDLA1500 is a highly sophisticated large lens adaptor for use on the HDC1500. While setting up a portable camera and a large lens can usually be a difficult task, the HDLA1500 adaptor allows this in a matter of seconds, by eliminating time consuming mechanical adjustments as well as wiring.

#### Features

- Totally new interlocking mechanism
- Low-profile design

#### Applicable Models

HDC1500 Multi-format HD Camera

#### Optional Accessories

HDTX100 HD Triax Adaptor (Fischer type)



### HDLA1500 Large Lens Adaptor (UC)

The HDLA1500 is the highly sophisticated large lens adaptor for the HDC1500 - maximizing operability. Generally, setting up a portable camera to a large lens adaptor can be a difficult task, especially fine-tuning the mechanical adjustments between each device. With the HDLA1500 adaptor, timeconsuming adjustments, as well as wiring, are absolutely eliminated.

#### Features

- Totally new interlocking mechanism
- Low-profile design

#### Applicable Models

HDC1500 Multi-format HD Camera

#### Optional Accessories

HDTX100 HD Triax Adaptor (Kings type)



## Camera Accessories/Peripherals

### HDTX100 HD Triax Adaptor (Kings type)

The HDTX100 and HDFX100 HD Triax Adaptors extensively expand applications of the HDC1000/HDC1500. By converting optical fiber transmission to the widely used triax transmission system, they enable high-quality pictures to be transmitted from the HDC1000 or HDC1500 camera or HDC1500 mounted on the HDLA1500 over long distances - up to 1400 m (4500 feet) with a 14.5 mm dia. triax cable or 1000 m (3200 feet) with a 13.2 mm dia. triax cable.

#### Features

- Converts optical fiber transmission to the widely used triax transmission system
- Long distance transmission - up to 1400 m (4500 feet) with a 14.5 mm dia. triax cable or 1000 m (3200 feet) with a 13.2 mm dia. triax cable

#### Applicable Models

HDC1000 Multi-format HD Camera  
HDC1500 Multi-format HD Camera  
HDFX100 HD Triax Adaptor (Kings type)  
HDLA1500 Large Lens Adaptor (UC)



Camera Accessories/Peripherals

### HDTX100 HD Triax Adaptor (Fischer type)

The HDTX100 and HDFX100 HD Triax Adaptors extensively expand applications of the HDC1000/HDC1500. By converting optical fiber transmission to the widely used triax transmission system, they enable high-quality pictures to be transmitted from the HDC1000 or HDC1500 camera or HDC1500 mounted on the HDLA1500 over long distances - up to 1400 m (4500 feet) with a 14.5 mm dia. triax cable or 1000 m (3200 feet) with a 13.2 mm dia. triax cable.

#### Features

- Converts optical fiber transmission to the widely used triax transmission system
- Long distance transmission - up to 1400 m (4500 feet) with a 14.5 mm dia. triax cable or 1000 m (3200 feet) with a 13.2 mm dia. triax cable

#### Applicable Models

HDC1000 Multi-format HD Camera  
HDC1500 Multi-format HD Camera  
HDFX100 HD Triax Adaptor (Fischer type)  
HDLA1500 Large Lens Adaptor (CE)



Camera Accessories/Peripherals

HDVF-700A 7-inch Type HD B/W CRT Viewfinder

Features

●High resolution B/W CRT viewfinder specially designed for use with the HDC-1000/900/910 — for direct camera installation ●Compact size with a reduced height, lightweight and energy saving design ●Extremely high center resolution of 1000 TV lines and wide peaking range contribute to a very crisp image and accurate focusing ●Accommodates multiple frame rates ●Large, very easy to see tally lamps ●Underscan display ●16:9/4:3 switchable ●Picture in picture for return video monitoring and HD Return video signal can be displayed ●Continuously variable peaking circuit provides a sharp image and easy focusing ●Drip-proof design is able to withstand light rain and well suited to outdoor use



Applicable Models

HDC1000 Multi-format HD Camera  
HDC-900 Multi-format HD Camera  
HDC-910 Multi-format HD Camera

Supplied Accessories

Studio monitor hood (1)  
Fuse (1)  
Operation manual (1)  
Number plate (1)

Optional Accessories

VFH-770 7-inch Type Viewfinder Sports Hood

Specifications

General

Power supply:  
10.5 to 17.0 V DC (supplied by the camera)  
Power consumption:  
33 W  
Operating temperature:  
0 °C to 40 °C (32 °F to 104 °F)  
Mass:  
5.0 kg (11 lb) not including hood

CRT

7-type monochrome, 90 ° deflection  
Dimensions:  
160 x 131mm (6 3/8 x 5 1/4 inches)  
Picture size:  
120 x 90 mm (4 3/4 x 3 5/8 inches) (4:3 aspect ratio)

Deflection and high voltage

Brightness:  
500 cd/m<sup>2</sup>  
Resolution:  
800 lines at center  
600 lines at edges  
Geometric distortion:  
2.0% or less  
EHT voltage regulation:  
within ± 2.0%  
EHT voltage:  
12.5 kV (standard)

Input voltages and signal characteristics

Supported formats:  
Effective scanning lines/Format/Horizontal scanning frequency/Vertical scanning frequency  
1080/23.98PsF/26.97 kHz/47.95 Hz  
1080/24PsF/27 kHz/48 Hz  
1080/25PsF/28.13 kHz/50 Hz  
1080/29.97PsF/33.72 kHz/59.94 Hz  
1080/30PsF/33.75 kHz/60 Hz  
1080/50i/28.13 kHz/50 Hz  
1080/59.94i/33.72 kHz/59.94 Hz  
1080/60i/33.75 kHz/60 Hz  
1035/59.94i/33.72 kHz/59.94 Hz  
1035/60i/33.75 kHz/60 Hz  
Video input:  
1.0 Vp-p ± 6dB, 75 Ω terminated  
Video input:  
1.0 Vp-p ± 6dB (SMPTE 240M), 75 Ω terminated  
DC restoration:  
Back porch type  
Back porch level: within 2% of peak  
(The fluctuation in black level against 10% to 90% fluctuation in APL)  
Frequency response:  
0.1 to 23 MHz (±2 dB)  
23 to 27 MHz (± 3dB)  
Peaking:  
0 to 18 dB (17 MHz)  
Synchronization:  
Line pull range: Horizontal: ±500 Hz or more, Vertical: -10 Hz or more  
Line hold range: ±500 Hz or more

## Camera Accessories/Peripherals

### HDVF-9900 9-inch Type HD Color CRT Viewfinder

#### Features

- Adopts a new 9-inch type HD CRT
- For use with the HDC-1000/900/910 HD Studio Camera
- Supports 1080/59.94i, 60i, 50i and 24PsF formats

#### Applicable Models

HDC1000 Multi-format HD Camera

#### Supplied Accessories

Studio monitor hood (1)

Field monitor hood (1)

Operation manual (1)

Number plate (1)

#### Specifications

##### General

Power requirement:

DC 10.5 to 17.0 V (supplied from the camera)

Power Consumption:

50 W

Operating temperature:

-20 °C to 45 °C

Mass:

7.9 kg (hood excluded)

Dimensions (W x H x D):

290 x 192 x 435 mm

##### Picture device

Type:

9-inch type CRT 0.25 mm Super Fine Pitch  
Trinitron

Screen diagonal:

155.5 (H) x 87.4 (V) mm (6 1/8 x 3 1/2 inches)

Horizontal resolution:

340 TV lines (16:9)

Brightness:

250 cd/m<sup>2</sup>

Color temperature:

6500 K

Indication:

R Tally, G Tally, I FAN ALARM

##### Deflection and high voltage

Geometric distortion:

2.0% or less

EHT voltage regulation:

within  $\pm 1.0\%$

EHT voltage:

16 kV (standard)

##### Input voltages and signal characteristics

Supported formats:

1080/50i/28.13 kHz/50 Hz

1080/59.94i/33.72 kHz/59.94 Hz

1080/60i/33.75 kHz/60 Hz

Video input:

1.0 Vp-p  $\pm 6$  dB, 75  $\Omega$  terminated

Video input:

1.0 Vp-p  $\pm 6$  dB (SMPTE 240M), 75  $\Omega$  terminated

DC restoration:

Back porch type

Back porch level: within 2% of peak

(The fluctuation in black level against 10% to 90% fluctuation in APL)

Frequency response:

0.1 to 25 MHz ( $\pm 3$  dB)

Peaking:

0 to 18 dB (15 MHz)

Synchronization:

Line pull range: Horizontal:  $\pm 500$  Hz or more, Vertical: -10 Hz or more

Line hold range:  $\pm 500$  Hz or more

### HDVF-C30W Multi-format HD Color LCD Viewfinder

#### Features

- For use with the HDC-1500/950/930/F950 and HDW-F900H/750/730/700A
- The high quality 2.7-inch type TFT color LCD panel provides a high resolution of 960 pixels horizontally (equivalent to 540 TV lines) x 540 pixels vertically
- Accommodates multiple frame rates
- The 2x magnification function simplifies focus operation, especially when prime lenses are used
- Gray scale signals can be generated, allowing camera operators to easily adjust exposure to the appropriate level
- A detachable eyepiece design allows the user to directly view the LCD
- Light weight construction
- Very low power consumption



#### Applicable Models

HDC1500 Multi-format HD Camera

HDC-930 Multi-format HD Camera

HDC-950 Multi-format HD Camera

HDC-F950 Digital 4:4:4 HD Camera System

HDW-730S HDCAM Camcorder

HDW-750 HDCAM Camcorder

HDW-750P HDCAM Camcorder

HDW-F900H HDCAM Camcorder

#### Supplied Accessories

Operation manual (1)

Connecting cable (1)

#### Specifications

##### General

Power supply:

DC 10.5 to 17.0 V (supplied by the camera)

Power consumption:

5.2 W

Operating temperature:

0 °C to 45 °C (32 °F to 115 °F)

Storage temperature:

-20 °C to 60 °C (-4 °F to 140 °F)

Mass:

850 g (1 lb 14 oz)

##### LCD

2.7-inch type color TFT screen

Image display area dimensions:

59.04 (H) x 33.21 (V) mm (2 3/8 x 1 5/16 inches)

## Camera Accessories/Peripherals

# HDVF-C700W Multi-format HD Color LCD Viewfinder

### Features

- For use with the HDC-900/910 studio camera
- The high quality 6-inch type TFT color LCD panel provides a high resolution of 960 pixels horizontally (equivalent to 540 TV lines) x 540 pixels vertically
- Accommodates multiple frame rates
- The extremely compact design allows much greater panning and tilting angles than CRT-base viewfinders
- Very low power consumption

### Applicable Models

HDC-900 Multi-format HD Camera  
HDC-910 Multi-format HD Camera

### Supplied Accessories

Monitor hood (1)  
Number plate (1)  
Operation manual (1)  
V-shaped shoe attachment (1)  
Hexagonal key (1)  
Hexagonal socket head screws (4)  
Connecting cable (1)

### Specifications

#### General

##### Power supply:

DC 10.5 to 17.0 V (supplied by the camera)

##### Power consumption:

10 W

##### Operating temperature:

0 °C to 45 °C (32 °F to 113 °F)

##### Storage temperature:

-20 °C to 60 °C (-4 °F to 140 °F)

##### Mass:

2.2 kg (4.9 lb) not including hood

#### LCD

6-type color TFT screen

##### Image display area dimensions:

132, 74mm (5 1/4, 3 inches) (16:9 aspect ratio)

##### Tally lamps display area dimensions:

132, 4mm (5 1/4, 3/16 inches) (The upper and the lower part)

#### Performance

##### Brightness:

300 cd/m<sup>2</sup>

##### Resolution:

500 or more lines

##### Supported formats:

Effective scanning lines/Format/Horizontal scanning frequency/Vertical scanning frequency

1080/23.98PsF/26.97 kHz/47.95 Hz

1080/24PsF/27 kHz/48 Hz

1080/25PsF/28.13 kHz/50 Hz

1080/29.97PsF/33.72 kHz/59.94 Hz

1080/30PsF/33.75 kHz/60 Hz

1080/50i/28.13 kHz/50 Hz

1080/59.94i/33.72 kHz/59.94 Hz

1080/60i/33.75 kHz/60 Hz

1035/59.94i/33.72 kHz/59.94 Hz

1035/60i/33.75 kHz/60 Hz

##### Color temperature:

6500 K

##### Indicators:

R TALLY/G TALLY/BATT/!

##### Input signals:

Pb, Pr: 0.7 Vp-p, asynchronous, 75  $\Omega$  terminated

Y: 1.0 Vp-p, synchronous, 75  $\Omega$  terminated

#### Connectors

CAMERA connector

D-sub 25-pin



## Camera Accessories/Peripherals

# HDVF-C750W Multi-format HD Color LCD Viewfinder

### Features

- For use with the HDC-1500/950/F950 and HDW-F900/750/730 with HDCA-901\*The high quality 6-inch type TFT color LCD panel provides a high resolution of 960 pixels horizontally (equivalent to 540 TV lines) x 540 pixels vertically
- Accommodates multiple frame rates
- The extremely compact design allows much greater panning and tilting angles than CRT-base viewfinders
- Very low power consumption

### Applicable Models

HDC1000 Multi-format HD Camera  
HDC-930 Multi-format HD Camera  
HDC-950 Multi-format HD Camera  
HDC-F950 Digital 4:4:4 HD Camera System  
HDW-F900H HDCAM Camcorder

### Supplied Accessories

Monitor hood (1)  
Number plate (1)  
Operation manual (1)  
V-shaped shoe attachment (1)  
Hexagonal key (1)  
Hexagonal socket head screws (4)  
Connecting cable (1)

### Specifications

#### General

##### Power supply:

DC 10.5 to 17.0 V (supplied by the camera)

##### Power consumption:

10 W

##### Operating temperature:

0 °C to 45 °C (32 °F to 115 °F)

##### Storage temperature:

- 20 °C to 60 °C (- 4 °F to 140 °F)

##### Mass:

2.0 kg (4.4 lb) not including hood

#### LCD

6-inch type color TFT screen

##### Image display area dimensions:

132, 74mm (5 1/4, 3 inches) (16:9 aspect ratio)

##### Tally lamps display area dimensions:

132, 4mm (5 1/4, 3/16 inches) (The upper and the lower part)

#### Performance

##### Brightness:

300 cd/m<sup>2</sup>

##### Resolution:

500 or more lines

##### Supported formats:

Effective scanning lines/Format/Horizontal scanning frequency/Vertical scanning frequency

1080/23.98PsF/26.97 kHz/47.95 Hz

1080/24PsF/27 kHz/48 Hz

1080/25PsF/28.13 kHz/50 Hz

1080/29.97PsF/33.72 kHz/59.94 Hz

1080/30PsF/33.75 kHz/60 Hz

1080/50I/28.13 kHz/50 Hz

1080/59.94I/33.72 kHz/59.94 Hz

1080/60I/33.75 kHz/60 Hz

1035/59.94I/33.72 kHz/59.94 Hz

1035/60I/33.75 kHz/60 Hz

##### Color temperature:

6500 K

##### Indicators:

R TALLY/G TALLY/BATT/!

##### Input signals:

Pb, Pr: 0.7 Vp-p, asynchronous, 75 Ω terminated

Y: 1.0 Vp-p, synchronous, 75 Ω terminated

#### Connectors

##### CAMERA connector:

Round type 20-pin



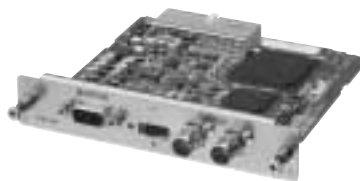
## Camera Accessories/Peripherals

### HFBK-HD1 HD SDI Output Board

The HFBK-HD1 is an HD SDI Output Board for the HFU-X310 Optical Interface Unit which is used with the HDC-X310/X310K HD multi-purpose camera.

#### Applicable Models

HDC-X310 HD Multi-purpose Camera  
HDC-X310K HD Multi-purpose Camera  
HFU-X310 HD Optical Fiber Interface Unit

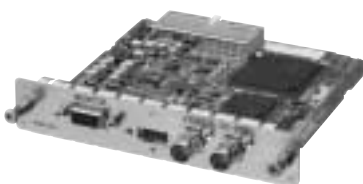


### HFBK-SD1 SDI Output Board

The HFBK-SD1 is an SDI Output Board for the HFU-X310 Optical Interface Unit which is used with the HDC-X310/X310K HD multi-purpose camera.

#### Applicable Models

HDC-X310 HD Multi-purpose Camera  
HDC-X310K HD Multi-purpose Camera  
HFU-X310 HD Optical Fiber Interface Unit



### HFBK-TS1 iLINK (HDV) Output Board

The HFBK-TS1 is an i.LINK (HDV) Output Board for the HFU-X310 Optical Interface Unit which is used with the HDC-X310/X310K HD multi-purpose camera.

#### Applicable Models

HDC-X310 HD Multi-purpose Camera  
HDC-X310K HD Multi-purpose Camera  
HFU-X310 HD Optical Fiber Interface Unit

### HFBK-XG1 XGA Output Board

The HFBK-XG1 is an XGA Output Board for the HFU-X310 Optical Interface Unit which is used with the HDC-X310/X310K HD multi-purpose camera.

#### Applicable Models

HDC-X310 HD Multi-purpose Camera  
HDC-X310K HD Multi-purpose Camera  
HFU-X310 HD Optical Fiber Interface Unit

## Camera Accessories/Peripherals

# HFU-X310 HD Optical Fiber Interface Unit

The HFU-X310 is an optical fiber interface unit for use with the HDC-X310/X310K camera.

### Features

●Compact design ●Long cable runs ●A range of interfaces

### Applicable Models

HDC-X310 HD Multi-purpose Camera

HDC-X310K HD Multi-purpose Camera

### Supplied Accessories

Operation manual (1)

OFC cover (1)

M3 x 4 screws (2)

M4 x 4 screw (1)

Multi-connector plug (1)

### Optional Accessories

HFBK-HD1 HD SDI Output Board

HFBK-SD1 SDI Output Board

HFBK-XG1 XGA Output Board

HFBK-TS1 iLINK (HDV) Output Board

### Specifications

#### General

Power requirements

AC 100 to 240 V, 50/60 Hz

Current consumption

Max. 0.6 A

Operating temperature

+5 to +40 °C (+41 to +104 °F)

Storage temperature

-20 to +60 °C (-4 to +140 °F)

Maximum cable length

Optical fiber cable (single mode): 1000 m (3280 feet)

Dimensions (W x H x D)

200 x 88 x 215 mm (7 7/8 x 3 1/2 x 8 1/2 inches) without projection

Mass

Approx. 2 kg (4 lb 6 oz)

#### Signal inputs/outputs

Remote

8-pin (1)

Genlock

BNC type (2), 3-level/2-level (VBS, VS)

Sync block 0.3 Vp-p (when terminated), 75

Ω, loop-through

HD SDI input (\*)

BNC type (1) Conforming to SMPTE 292M

OFC

Single mode, LC connectors (2),

send/receive

Multi-connector

6-pin (1)

AC input

3-pin (1)



(\*)Requires upgrading

## Camera Accessories/Peripherals

### HKC-SV1 Filter Survo Unit

The HKC-SV1 is a filter survo unit that allows the optical ND filters of the HDC-X300/X300K/X310/X310K to be controlled remotely from the RM-B750/B150 Remote Control Unit, RCP-700 Series Remote Control Panel, or MSU-900/950 Master Setup Unit.



#### Applicable Models

HDC-X300 HD Multi-purpose Camera  
HDC-X300K HD Multi-purpose Camera  
HDC-X310 HD Multi-purpose Camera  
HDC-X310K HD Multi-purpose Camera

### HKC-T950 Sony HD CCD Block Adapter

#### Features

- Used with HDC-950 ●Extendable CCD block
- Detachable carrying handle and viewfinder ●10m cable is supplied ●Maximum extension length is 50m with custom made cable

#### Applicable Models

HDC-950 Multi-format HD Camera  
HDC-F950 Digital 4:4:4 HD Camera System



### HKCU1001 SD Analog Interface Unit

The HKCU1001 is an interface expansion option board for the HDCU1000/HDCU1500. It provides two analog NTSC or PAL VBS signal outputs, WFM output, and a monitor output.

#### Applicable Models

HDCU1000 Camera Control Unit  
HDCU1500 Camera Control Unit

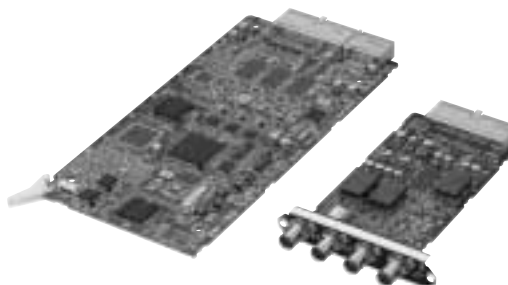
#### Specifications

VBS output

BNC type (2)

Analog composite monitor output

BNC type: WF (1), PIX (1)

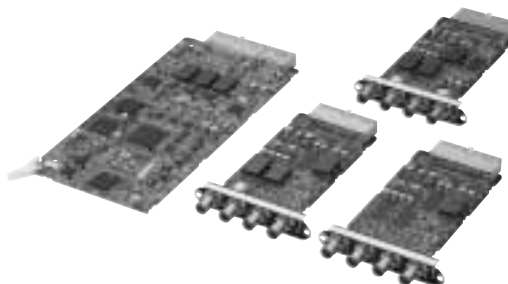


### HKCU1003 Multi Interface Unit

The HKCU1003 is an interface expansion option board for the HDCU1000/HDCU1500. It consists of three types of interface board and provides: - Frame reference input and output to lock 2-3 pull-down sequence - Two analog NTSC or PAL VBS signal outputs - Analog NTSC or PAL VBS and analog component R/G/B or Y/R-Y/B-Y outputs

#### Applicable Models

HDCU1000 Camera Control Unit  
HDCU1500 Camera Control Unit

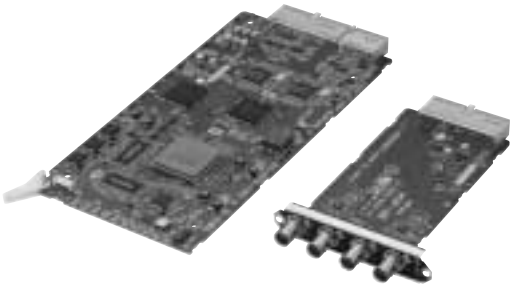


## Camera Accessories/Peripherals

### HKCU1005 HD/SD Expansion Unit

The HKCU1005 is an interface expansion option board for the HDCU1000/HDCU1500. It provides four HD-SDI or SD-SDI outputs.

Applicable Models  
HDCU1000 Camera Control Unit  
HDCU1500 Camera Control Unit

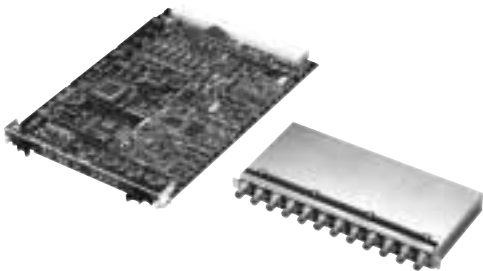


### HKCU-901 SD Encoder Board

#### Features

- Used with the HDCU-900 Camera Control Unit
- Provides the HDCU-900 with NTSC and PAL VBS outputs and V/F returns, and an analog component output

\*For signals originated in progressive mode, the composite output of this board is for monitoring purpose only



Applicable Models  
HDCU-900 Camera Control Unit

#### Specifications

##### General

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

- 20 °C to 60 °C (- 4 °F to 140 °F)

Dimensions (W/H/D):

IF Board: 330 x 230 x 21 mm (13 x 9 1/8 x 27/32 inch)

VDA Board: 255 x 128 x 30 mm (10 1/8 x 5 1/8 x 1 3/16 inches)

Mass:

Approx. 1.3 kg (2 lb 14 oz)

##### Input connectors

RET INPUT:

BNC type x 4, 1.0 Vp-p, 75 Ω, VBS

##### Output connectors

VBS OUT:

BNC type x 2, 1.0 Vp-p, 75 Ω, VBS

Y/G, B-Y/B, R-Y/R OUTPUT:

BNC type x 2

R/G/B (100% white): 0.7 Vp-p, 75 Ω, component video

Y (100% white): 0.714 Vp-p (NTSC) or 0.7 Vp-p (PAL)

R-Y/B-Y (75% color bar): 0.7 Vp-p (NTSC) or 0.525 Vp-p (PAL)

SD SYNC OUT:

BNC type x 1, composit sync, 0.3 Vp-p, 75 Ω

PIX OUT:

BNC type x 1, VBS/R/G/B (VBS 1 Vp-p, 75 Ω)

WF OUT:

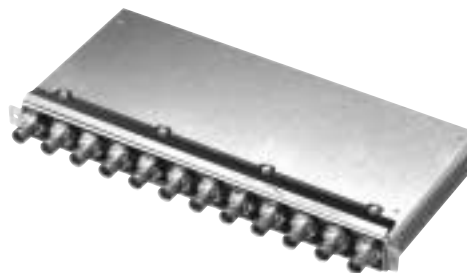
BNC type x 1, VBS/R/G/B (VBS 1 Vp-p, 75 Ω)

## Camera Accessories/Peripherals

### HKCU-902 HD Analog Interface Board

#### Features

- Used with the HDCU-900 Camera Control Unit
- Provides the HDCU-900 with HD analog outputs and VF returns (as defined by SMPTE-240M)



#### Applicable Models

HDCU-900 Camera Control Unit

#### Specifications

##### General

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

- 20 °C to 60 °C (- 4 °F to 140 °F)

Dimensions (W/H/D):

VDA Board: 255 x 128 x 30 mm (10 1/8 x 5 1/8 x 1 3/16 inches)

Mass:

Approx. 0.6 kg (21 oz)

##### Input connectors

RET INPUT:

BNC type x 4, HD SMPTE-274M (Y), 1.0

Vp-p, 75 Ω

##### Output connectors

Y/G, PB/B, PR/R OUTPUT:

BNC type: 2 sets, 1 each), SMPTE 274M

Y/R/G/B: 1.0Vp-p, 75 Ω

PB, PR: 0.7 Vp-p, 75 Ω

R, PB, PR to G, B, R selectable

SYNC OUT:

BNC type x 1, BTA-S001A, tri-level sync,

0.6 Vp-p

PIX OUT:

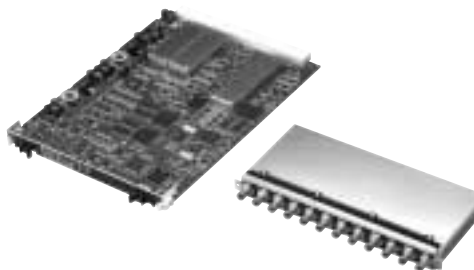
BNC type x 1, SMPTE-274M, Y/R/G/B, 1.0

Vp-p, 75 Ω

### HKCU-903 HD Frame Converter Board

#### Features

- Used with the HDCU-900 Camera Control Unit
- Provides the HDCU-900 with 3:2 pull down capability to convert the picture format between cinematic 24P, progressive 30 frame, and interlace 60 field



#### Applicable Models

HDCU-900 Camera Control Unit

#### Specifications

##### General

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

- 20 °C to 60 °C (- 4 °F to 140 °F)

Dimensions (W/H/D):

FC Board: 330 x 230 x 21 mm (13 x 9 1/8 x 27/32 inches)

SDI Board: 255 x 128 x 30 mm (10 1/8 x 5 1/8 x 1 3/16 inches)

Mass:

Approx. 1.3 kg (2 lb 14 oz)

##### Input/Output connectors

FRAME REFERENCE:

BNC type x 2

HD: SMPTE 274M, tri-level sync input, 0.6 Vp-p, 75 Ω

SD: black burst input, 0.286 Vp-p, 75 Ω (NTSC), 0.3 Vp-p, 75 Ω (PAL)

Loop-through output or frame sync pulse output, 0.3 Vp-p, 75 Ω, selectable

##### Input connectors

HD SERIAL RET INPUT:

BNC type x 4, SMPTE 292M 1.485

Gb/s/1.4835 Gb/s bit rate

##### Output connectors

HD SERIAL OUTPUT:

BNC type x 3, SMPTE 292M, 0.8 Vp-p,

75Ω, 1.485 Gb/s/1.4835 Gb/s bit rate

HD SERIAL MONITOR OUTPUT:

BNC type x 1, SMPTE-292M, 0.8 Vp-p, 75 Ω, 1.485 Gb/s/1.4835 Gb/s bit rate

SYNC OUT (Left):

BNC type x 1

SD: composite sync, 0.3 Vp-p, 75 Ω (when the RC board is installed in the upper slot)

HD: BTA-S1101, tri-level sync, 0.6 Vp-p, 75 Ω

SYNC OUT (Right):

BNC type x 1

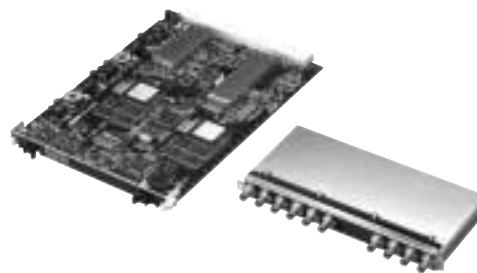
HD: BTA-S1101, tri-level sync, 0.6 Vp-p, 75 Ω

## Camera Accessories/Peripherals

### HKCU-904 Line Converter Board

#### Features

- Used with the HDCU-900 Camera Control Unit
- Converts 1080-line pictures into 720-line pictures and provides four sets each of HD-SDI outputs and V/F returns



#### Applicable Models

HDCU-900 Camera Control Unit

#### Specifications

##### General

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

- 20 °C to 60°C ( -4 °F to +140 °F)

Dimensions (W/H/D):

LC Board: 330 x 230 x 21 mm (13 x 9 1/8 x 27/32 inches)

SDI Board: 255 x 128 x 30 mm (10 1/8 x 5 1/8 x 1 3/16 inches)

Mass:

Approx. 1.3 kg (2 lb 14 oz)

#### Input connectors

HD SERIAL RET INPUT:

BNC type x 4, SMPTE 292M (720/60P),  
1.485 Gb/s/1.4835 Gb/s bit rate

#### Output connectors

HD SERIAL OUTPUT:

BNC type x 3, SMPTE 292M (720/60P), 0.8  
Vp-p, 75  $\Omega$ , 1.485 Gb/s/1.4835 Gb/s bit rate

SYNC OUT (Left):

BNC type x 1

SD: composite sync, 0.3 Vp-p, 75  $\Omega$  (when  
the RC board is installed in the upper slot)

HD: BTA-S1101, tri-level sync, 0.6 Vp-p, 75  
 $\Omega$

SYNC OUT (Right):

BNC type x 1

HD: BTA-S1101, tri-level sync, 0.6 Vp-p, 75  
 $\Omega$

### HKCU-951 SD Encoder Board

#### Features

- Used with the HDCU-950 Camera Control Unit
- Provides the HDCU-950 with NTSC and PAL analog VBS outputs and V/F returns, and an analog component output

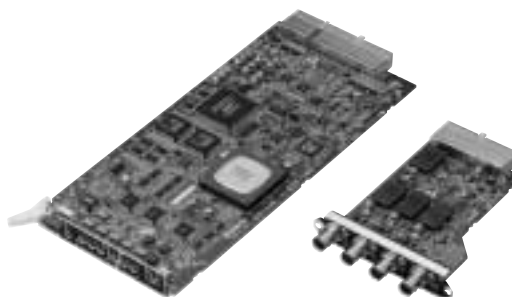
#### Specifications

##### Analog VBS output

BNC type (x 1) (total 3 VBS outputs using  
SDI output connector)

##### Analog Component output

BNC type (x 3 for 1set), Y/R-Y/B-Y or  
R/G/B selectable



### HKCU-953 HD Frame Converter Board

#### Features

- Used with the HDCU-950 Camera Control Unit
- Provides the HDCU-950 with 3:2 pull down capability to convert the picture format between cinematic 24P, progressive 30 frame, and interlace 60 field

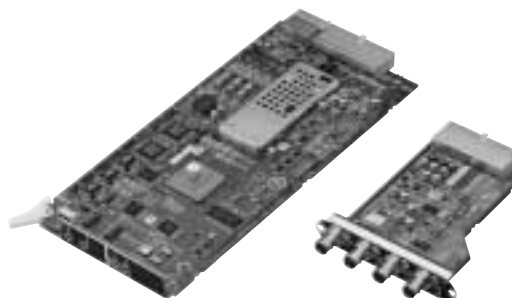
#### Specifications

##### HD SDI output

BNC type (x 2), SMPTE-292M, 1080/50i,  
60i, 30P, 25P, 24P

##### Frame reference input

BNC type (x 1) with loop-through), full  
pull-down sequence lock



## Camera Accessories/Peripherals

### LC-421 Carrying Case

#### Features

●Can hold the

DXC-D50/D50P/D50WS/D50WSP/D35/D35P/D35WS/D35WSP/637/637P/327B/327BP in camcorder configuration with DSR-1/1P, PVV-3/3P, EVV-9000/9000P

#### Applicable Models

DXC-D50H 3-chip CCD Portable Color

Camera

DXC-D50K 3-chip CCD Portable Color

Camera

DXC-D50L 3-chip CCD Portable Color

Camera

DXC-D50PH 3-chip CCD Portable Color

Camera

DXC-D50PK 3-chip CCD Portable Color

Camera

DXC-D50PL 3-chip CCD Portable Color

Camera

DXC-D50WSH 3-chip CCD Portable Color

Camera

DXC-D50WSL 3-chip CCD Portable Color

Camera

DXC-D50WSPL 3-chip CCD Portable Color

Camera

#### Specifications

##### Dimensions:

790 (W) × 440 (H) × 340 (D) mm

(31 1/8 × 17 3/8 × 13 1/2 inches)

##### Mass:

7.7 kg (17 lb)



### LC-DS300SFT Soft Carrying Case

#### Features

●Direct pack with accessories attached: Battery pack, Microphone, Viewfinder and Zoom lens. ●Easy to pack a variety of accessories such as Battery charger and other items.

#### Applicable Models

DSR-400K DVCAM Camcorder

DSR-400L DVCAM Camcorder

DSR-400PK DVCAM Camcorder

DSR-400PL DVCAM Camcorder

DSR-450WSL DVCAM Camcorder

DSR-450WSPL DVCAM Camcorder

#### Specifications

##### Mass:

3.5 kg (7 lb 11 oz)

##### Dimensions (w/h/d):

220 × 300 × 620 mm

(without projection)

(8 3/4 × 11 7/8 × 24 1/2 inches)



## Camera Accessories/Peripherals

### LC-DS500 Hard Carrying Case

#### Features

- Direct pack with accessories attached: Battery pack, Microphone, Wireless receiver Viewfinder and Zoom lens.
- Easy to pack a variety of accessories such as Battery charger and other items

#### Specifications

##### Mass:

8 kg (17 lb 10 oz)

##### Dimensions (w/h/d):

454 X 777 X 396 mm

(16 3/4 x 30 5/8 x 15 5/8 inches)



### LCR-1 Camera Rain Cover

#### Features

- Transparent material used to operate camera and VTR switches with the LCR-1 on

#### Applicable Models

BVP-9500WS Super Motion Video Camera

BVP-9500WSP Super Motion Video Camera

DSR-400K DVCAM Camcorder

DSR-400L DVCAM Camcorder

DSR-400PK DVCAM Camcorder

DSR-400PL DVCAM Camcorder

DSR-450WSL DVCAM Camcorder

DSR-450WSPL DVCAM Camcorder

DXC-D50H 3-chip CCD Portable Color Camera

DXC-D50K 3-chip CCD Portable Color Camera

DXC-D50L 3-chip CCD Portable Color Camera

DXC-D50PH 3-chip CCD Portable Color Camera

DXC-D50PK 3-chip CCD Portable Color Camera

DXC-D50PL 3-chip CCD Portable Color Camera

DXC-D50WSH 3-chip CCD Portable Color Camera

DXC-D50WSL 3-chip CCD Portable Color Camera

DXC-D50WSPL 3-chip CCD Portable Color Camera

#### Specifications

##### Mass:

260 g (9 oz)



### LO-23 Flexible Cable Unit

#### Features

- Servo zooming and manual focusing for Fujinon Lens, such as VCL-916 BYA and VCL-714BXA

#### Specifications

##### Cable length:

1 m (3.3 ft)

##### Mass:

1.2 kg (2 lb 10 oz)



## Camera Accessories/Peripherals

### LO-26 Flexible Cable Unit

#### Features

- Servo zooming and manual focusing for Canon Lenses, such as VCL-918BY

#### Specifications

Cable length:

1 m (3.3 ft)

Mass:

1.1 kg (2 lb 7 oz)



### MSU-700A Master Setup Unit

#### Features

- 32 scene files capability
- Built-in software for use in HDTV camera system
- A single MSU-700A can set up 24 camera/CCU units with two CNU-700s and four VCS-700s
- The unit is connected to CCU or a Camera Command Network Unit (CNU) which is connected to CCU by a special cable of up to 200 m (656 feet) in length and controls the camera functions



#### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera

#### Supplied Accessories

Operation manual (1)  
Maintenance manual Part 1 (1)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power requirements:  
100 to 240 V AC, 50/60 Hz  
Current consumption:  
0.45 A  
Operating temperature:  
0 to 45°C (32 to 113°F)

Maximum cable length:

200 m (656 feet)

Dimensions:

482(W) x 222(H) x 67(D) mm  
(19 x 8 3/4 x 2 3/4 inches)

including projecting parts and controls

Mass:

Approx. 4.5 kg (9 lb 15 oz)

#### Inputs/outputs

Remote

CCU/CNU:

8-pin multiconnector (1)

AUX:

8-pin multiconnector (1)

I/O port:

50-pin (1)

AC input:

3-pin (1)

## Camera Accessories/Peripherals

# MSU-750 Master Setup Unit

### Features

- Master setup unit with powerful features in a compact size (same as RCP-721 x 2)
- Space-saving, suitable for OB van application
- New RISC CPU adopted for high-speed digital control
- Built-in software for use in HDTV camera system
- Can be used either for BVP-900/500 series camera system or HDC-700 series HDTV camera system
- Enhanced control menu on the touch panel
- 32 scene files capability
- A single MSU-750 can set up 24 camera/CCU units with two CNU-700s and four VCS-700s
- No fuse or power supply cable is bundled

### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera

BVP-E30P 3-chip CCD Portable Color

Camera

BVP-E30WS 3-chip CCD Portable Color

Camera

BVP-E30WSP 3-chip CCD Portable Color

Camera

### Supplied Accessories

Operation Manual (1)

Maintenance Manual Part 1 (1)

### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

### Specifications

#### General

Power requirements:

100 to 240 V AC, 50/60 Hz

Current consumption:

0.4 A

Operating temperature:

0 to 45°C (32 to 113°F)

Maximum cable length:

200 m (656 feet)

Dimensions:

204 (W) x 354(H) x 67(D) mm

(8 1/8 x 14 x 2 3/4 inches)

including projecting parts and controls

Mass:

Approx. 3.5 kg (7 lb 11 oz)

#### Inputs/outputs

Remote

CCU/CNU:

8-pin multiconnector (1)

AUX:

8-pin multiconnector (1)

AC input:

3-pin (1)



Camera Accessories/Peripherals

MSU-900 Master Setup Unit

The MSU-900 Master Setup Unit is a central control panel used for the adjustment of camera parameters in a multi-camera system. The MSU-900/950 is connected to each camera control unit in the system via the CNU-700 Command Network Unit or an Ethernet network hub.



Features

- Central control of camera parameters for the entire camera system
- Picture and waveform monitor switching
- Precise picture adjustment
- Built-in 6.5-inch (\*) type LCD display for clear viewing of adjustment parameters during operation
- Memory Stick slot for storing/recalling files
- Built-in Ethernet interface (100Base-T)

(\*) Viewable area, measured diagonally

Applicable Models

- BVP-E30 3-chip CCD Portable Color Camera
- BVP-E30P 3-chip CCD Portable Color Camera
- BVP-E30WS 3-chip CCD Portable Color Camera
- BVP-E30WSP 3-chip CCD Portable Color Camera
- DVW-970 Digital Betacam Camcorder
- HDC1000 Multi-format HD Camera
- HDC1500 Multi-format HD Camera
- HDCU1000 Camera Control Unit
- HDCU1500 Camera Control Unit
- HDC-X300 HD Multi-purpose Camera
- HDC-X300K HD Multi-purpose Camera
- HDC-X310 HD Multi-purpose Camera
- HDC-X310K HD Multi-purpose Camera

Optional Accessories

- CCA-5 Cables 8-pin/8-pin Remote Control Cable

Specifications

General

- Power requirements
  - AC 100 to 240 V, 50/60 Hz
- Current consumption
  - 0.35 A
- Operating temperature
  - +5 to +40 °C (+41 to +104 °F)
- Maximum cable length
  - 200 m (656 feet)
- Mass
  - Approx. 4.5 kg (9 lb 14 oz)

Dimensions (W x H x D)

- 482 x 67 x 222 mm (19 x 2 3/4 x 8 3/4 inches)

Inputs/outputs

- Remote
  - CCU/CNU: 8-pin (1)
  - AUX: 8-pin (1)
- I/O port
  - 50-pin (1)
- Ethernet
  - 6-pin (1)
- AC input
  - 3-pin (1)

## Camera Accessories/Peripherals

### MSU-950 Master Setup Unit

The MSU-950 Master Setup Unit is a central control panel used for the adjustment of camera parameters in a multi-camera system. The MSU-950 is connected to each camera control unit in the system via the CNU-700 Command Network Unit or an Ethernet network hub.

#### Features

- Central control of camera parameters for the entire camera system
- Picture and waveform monitor switching
- Precise picture adjustment
- Built-in 6.5-inch (\*) type LCD display for clear viewing of adjustment parameters during operation
- Memory Stick slot for storing/recalling files
- Built-in Ethernet interface (100Base-T)

(\*) Viewable area, measured diagonally

#### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
 BVP-E30P 3-chip CCD Portable Color Camera  
 BVP-E30WS 3-chip CCD Portable Color Camera  
 BVP-E30WSP 3-chip CCD Portable Color Camera  
 DVW-970 Digital Betacam Camcorder  
 HDC1000 Multi-format HD Camera  
 HDC1500 Multi-format HD Camera  
 HDCU1000 Camera Control Unit  
 HDCU1500 Camera Control Unit  
 HDC-X300 HD Multi-purpose Camera  
 HDC-X300K HD Multi-purpose Camera  
 HDC-X310 HD Multi-purpose Camera  
 HDC-X310K HD Multi-purpose Camera

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power requirements

AC 100 to 240 V, 50/60 Hz

Current consumption

0.35 A

Operating temperature

+5 to +40 °C (+41 to +104 °F)

Maximum cable length

200 m (656 feet)

Mass

Approx. 3.7 kg (8 lb 2 oz)

Dimensions (W x H x D)

204 x 354 x 67 mm (8 1/8 x 14 x 2 3/4 inches)

##### Inputs/outputs

Remote

CCU/CNU: 8-pin (1)

AUX: 8-pin (1)

I/O port

50-pin (1)

Ethernet

6-pin (1)

AC input

3-pin (1)



## Camera Accessories/Peripherals

### MVA-265 Operation Microscope Adaptor

Operation microscope adaptor (one way)

#### Features

●For 1/2-inch video camera with bayonet mount ●For Carl Zeiss OPMI series/TOPCON 600 series

#### Specifications

Video camera mount:

Bayonet

Applicable microscope:

Operation microscope

Dimensions:

148 (W) × 92 (H) × 50 (D) mm

(5 7/8 × 3 5/8 × 2 inches)

Mass:

550 g (1 lb 3 oz)



Camera Accessories/Peripherals

### MVA-380 Operation microscope adaptor (two way)

#### Features

●For 2/3-inch video camera with bayonet mount ●For Carl Zeiss OPMI series/TOPCON 600 series ●Focus can be remotely controlled by the supplied remote controller

#### Specifications

Video camera mount:

Bayonet

Applicable microscope:

Operation microscope

Dimensions:

70 (W) × 94 (H) × 184 (D) mm

(2 7/8 × 3 3/4 × 7 1/4 inches)

Mass:

750 g (1 lb 10 oz)



## Camera Accessories/Peripherals

### RCP-700 Remote Control Panel (Joystick Type)

#### Features

●Controls Painting (black and white), Master Black and Iris Control menus for daily operation ●Basically used as a sub control panel to support MSU-700A/750 or RCP-740/741/730/731/720/721 in combination with MSU-700A/750 ●Up to six units of RCP-700/701 can be mounted on a 19-inch rack drawer

#### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera  
HDCU1000 Camera Control Unit  
HDCU1500 Camera Control Unit

#### Supplied Accessories

Plug, 6-pin Male (1)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### Connectors

Remote:

CNU/CCU (8-pin)

Preview:

6-pin

##### General

Mass:

1.0 kg (2 lb 3 oz)

Dimensions:

68(W) x 221(H) x 127(D) mm

(2 3/4 x 8 3/4 x 5 inches)



Camera Accessories/Peripherals

### RCP-720 Remote Control Panel (Joystick Type)

#### Features

●Standard panel range including auto setup, scene file etc. for installations in middle to large sized studios and OB vehicle ●Designed for combined use with MSU-700A/750 as a sub control panel to support MSU-700A/750 ●Up to four units of RCP-720 can be mounted on a 19-inch rack drawer

#### Supplied Accessories

Plug, 6-pin Male (1)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### Connectors

Remote:

CNU/CCU (8-pin) AUX (8-pin)

Preview:

6-pin

##### General

Mass:

1.8 kg (3 lb 15 oz)

Dimensions:

102(W) x 354(H) x 127(D) mm

(4 1/8 x 14 x 5 inches)



## Camera Accessories/Peripherals

# RCP-750 Remote Control Panel (Joystick type)

### Features

●Small size with full paint control ●LCD panel for fully accessible menu system ●Color LCD panel can provide full painting control items for camera ●Memory Stick operation (Up to 64 MB type can be used) ●Parallel control function with MSU-700A/750 is available

### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera  
HDCU1000 Camera Control Unit  
HDCU1500 Camera Control Unit  
HDC-X300 HD Multi-purpose Camera  
HDC-X300K HD Multi-purpose Camera  
HDC-X310 HD Multi-purpose Camera  
HDC-X310K HD Multi-purpose Camera  
WLL-RX55 Wireless Camera Receiver

### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

### Specifications

#### General

Power requirements:

DC 10.5 to 35 V

Power consumption:

4 W max.

Maximum cable length:

200 m (656 feet) with CCU/HDCU connected

Operating temperature:

5°C to 40 °C (41°F to 104°F)

Mass:

1.5 kg (3 lb 5 oz)

Dimensions:

102 mm x 354 mm x 126.5 mm (4 1/8 x 14 x 5 inches)

#### Inputs/Outputs

Remote:

CCU/CNU: 8-pin x 1

AUX : 8-pin x 1

EXT I/O:

9-pin x 1



## Camera Accessories/Peripherals

# RCP-751 Remote Control Panel (Dial control type)

### Features

●Small size with full paint control ●LCD panel for fully accessible menu system ●Color LCD panel can provide full painting control items for camera ●Memory Stick operation (Up to 64 MB type can be used) ●Parallel control function with MSU-700A/750 is available

### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera  
HDCU1000 Camera Control Unit  
HDCU1500 Camera Control Unit  
HDC-X300 HD Multi-purpose Camera  
HDC-X300K HD Multi-purpose Camera  
HDC-X310 HD Multi-purpose Camera  
HDC-X310K HD Multi-purpose Camera  
WLL-RX55 Wireless Camera Receiver

### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

### Specifications

#### General

Power requirements:

DC 10.5 to 35 V

Power consumption:

4 W max.

Maximum cable length:

200 m (656 feet) with CCU/HDCU connected

Operating temperature:

5°C to 40 °C (41°F to 104°F)

Mass:

1.3 kg (2 lb 14 oz)

Dimensions:

102 mm x 354 mm x 86.5 mm (4 1/8 x 14 x 3 1/2 inches)

#### Inputs/Outputs

Remote:

CCU/CNU: 8-pin x 1

AUX : 8-pin x 1

EXT I/O:

9-pin x 1



## Camera Accessories/Peripherals

# RCP-D50 Remote Control Panel (Joystick Type)

### Features

- Covers the complete range of camera control functions
- Provides Joystick operation
- 3.5-inch (\*1) LCD screen with touch panel function
- Allows incoming camera image to be monitored on LCD panel (\*2)
- Memory Stick system — various scene files can be stored on/recalled from the Memory Stick media and loaded to a different RCP-D50/D51, DXC-D50, DSR-390/390P/570WS/570WSP

(\*1) Viewable area measured diagonally. (\*2) When used with a CCU-TX7/TX7P camera control unit, please ask Sony representative.

### Applicable Models

CCU-TX50 Camera Control Unit  
 CCU-TX50P Camera Control Unit  
 DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50PH 3-chip CCD Portable Color Camera  
 DXC-D50PK 3-chip CCD Portable Color Camera  
 DXC-D50PL 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 DXC-D50WSPL 3-chip CCD Portable Color Camera

### Supplied Accessories

CCA-7-5 Connecting Cable (5 m) (1)  
 Operation Manual (1)  
 Screws and Washers (2)  
 Number Plate (1)

### Optional Accessories

CCA-7 Cables 10-pin/10-pin Cable

### Specifications

Power requirements:

10 to 17 V  
 (supplied from camera or CCU)

Power consumption:

4.0 W

Operating temperature:

+5°C to 40°C (41°F to 104°F)

Storage temperature:

-20°C to 55°C (-4°F to 131°F)

Dimensions:

102 (W) x 74 (D) x 354 (D) mm  
 (4 1/8 x 3 x 14 inches)

Mass:

Approx. 1.5 kg (3 lb 5 oz)



## Camera Accessories/Peripherals

# RCP-D51 Remote Control Panel (Dial Control Type)

### Features

- Covers the complete range of camera control functions
- Provides Encoder operation ●3.5-inch (\*1) LCD screen with touch panel function ●Allows incoming camera image to be monitored on LCD panel (\*2) ●Memory Stick system — various scene files can be stored on/recalled from the Memory Stick media and loaded to a different RCP-D50/D51, DXC-D50, DSR-390/390P/570WS/570WSP

(\*1) Viewable area measured diagonally. (\*2) When used with a CCU-TX7/TX7P camera control unit, please ask Sony representative.

### Applicable Models

CCU-TX50 Camera Control Unit  
 CCU-TX50P Camera Control Unit  
 DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50PH 3-chip CCD Portable Color Camera  
 DXC-D50PK 3-chip CCD Portable Color Camera  
 DXC-D50PL 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 DXC-D50WSPL 3-chip CCD Portable Color Camera

### Supplied Accessories

CCA-7-5 Connecting Cable (5 m) (1)  
 Operation Manual (1)  
 Screws and Washers (2)  
 Number Plate (1)

### Optional Accessories

CCA-7 Cables 10-pin/10-pin Cable

### Specifications

Power requirements:

10 to 17 V  
 (supplied from camera or CCU)

Power consumption:

4.0 W

Operating temperature:

+5°C to 40°C (41°F to 104°F)

Storage temperature:

-20°C to 55°C (-4°F to 131°F)

Dimensions:

102 (W) x 74 (D) x 354 (D) mm  
 (4 1/8 x 3 x 14 inches)

Mass:

Approx. 1.3 kg (2 lb 14 oz)



## Camera Accessories/Peripherals

### RM-BR300 Remote Control Unit

#### Features

- Easy-to-use and ergonomic joystick design
- Feature-rich control panel

#### Applicable Models

BRC-300 3-CCD Color Video Camera  
BRU-300 Optical Multiplex Unit

#### Supplied Accessories

AC adaptor (1)  
AC power cable (1)  
RS-232C cable (1)  
Terminal connector (2)  
Operating instructions (1)



### RM-C950 Remote Control Unit

#### Features

- Full remote control of the camera functions and lens zoom/ focus/iris functions via RS-232C
- Facilitated operation with knob control of gain, detail, master pedestal, red and blue gain functions
- Power is supplied through the cameras connected to the CMA-D2 camera adaptor or CCU-M5 Remote Control Unit

#### Applicable Models

DXC-390 3-CCD Color Video Camera  
DXC-390P 3-CCD Color Video Camera  
DXC-990 3-CCD Color Video Camera  
DXC-990P 3-CCD Color Video Camera  
DXC-C33 3-CCD Color Video Camera  
DXC-C33P 3-CCD Color Video Camera

#### Supplied Accessories

Connection cable (3 m) (1)  
Operation manual (1)

#### Specifications

##### Power requirements:

DC 12 V (supplied from DXC-9000/950 connected to CMA-D2 or CCU-M5)

##### Operating temperature:

-5 to 45°C (23 to 113°F)

##### Connectors:

CAMERA (8-pin)

##### Mass:

Approx. 400 g (14 oz)

##### Dimensions:

212 (W) × 41 (H) × 132 (D) mm  
(8 3/8 × 1 5/8 × 5 1/4 inches)  
(excluding projecting parts and controls)



### RMM-301 Rack Mounting Bracket

#### Rack Mounting Bracket for CCU-350/355/550 series

#### Applicable Models

CCU-TX50 Camera Control Unit  
CCU-TX50P Camera Control Unit

#### Specifications

##### Dimensions:

482(W) × 132(H) × 330(D)mm  
(19 1/8 × 5 1/4 × 13 inches)

##### Mass:

4.7 kg (10 lb 6 oz)



## Camera Accessories/Peripherals

### RM-M7G Remote Control Unit

#### Features

●Compact and lightweight hand-held control unit ●For field production or video operational panel for use with CCU-M7/M5



#### Applicable Models

CCU-D50 Camera Control Unit  
CCU-D50P Camera Control Unit  
DXC-D50H 3-chip CCD Portable Color Camera  
DXC-D50K 3-chip CCD Portable Color Camera  
DXC-D50L 3-chip CCD Portable Color Camera  
DXC-D50PH 3-chip CCD Portable Color Camera  
DXC-D50PK 3-chip CCD Portable Color Camera  
DXC-D50PL 3-chip CCD Portable Color Camera  
DXC-D50WSH 3-chip CCD Portable Color Camera  
DXC-D50WSL 3-chip CCD Portable Color Camera  
DXC-D50WSPL 3-chip CCD Portable Color Camera

#### Specifications

Power requirements:  
DC 9 to 17V, from a camera or a CCU  
Power consumption:  
0.4 W  
Mass:  
500 g (1 lb 2 oz)  
Dimensions:  
86 (W) × 170 (H) × 47 (D) mm  
(3 1/2 × 6 3/4 × 1 7/8 inches)  
Inputs/outputs:  
CAMERA: 10-pin  
MONITOR OUT: BNC-type  
AUXILIARY IN: 10-pin

#### Control:

Gain select  
Output mode select  
VTR start/stop  
Iris (auto/manual)  
Auto iris override  
White and black balance (auto/manual/preset)  
White balance memory  
R/B gain  
Gamma (manual/preset)  
Master pedestal (manual/preset)  
R/B pedestal  
Knee point (auto/manual/preset)  
Shutter speed select  
Detail  
Lock (ON/Part/OFF)

### RMM-TXC7 Rack Mount Kit

#### Features

●Allows two CCU-TX7/TX7P units or one unit with a waveform monitor to be mounted into a standard 19-inch rack

Note: This product is not available in some countries.

#### Supplied Accessories

Installation manual (1)  
Blank panel (1)

#### Specifications

##### Mass:

Approx. 3.7 kg (8 lb 3 oz)

##### Dimensions:

482 (W) × 177 (H) × 380 (D) mm  
(19 1/8 × 7 × 15 inches)

(Note: This product is not available in some countries.)



Camera Accessories/Peripherals

RM-P9 Remote Control Unit

Features

- Designed to control Sony camcorders including Digital Betacam, Betacam SX and Betacam

Applicable Models

- DNW-7 Betacam SX Camcorder
- DNW-7P Betacam SX Camcorder
- DNW-90WS Betacam SX Camcorder
- DNW-90WSP Betacam SX Camcorder
- DNW-9WS Betacam SX Camcorder
- DNW-9WSP Betacam SX Camcorder

Supplied Accessories

- 6-pin remote control cable (10 m) (1)
- Operation and maintenance manual (1)

Specifications

- Power consumption: 0.5 W

- Mass: 0.5 kg (1 lb 2 oz)

- Dimensions: 86(W) x 179(H) x 65(D)mm (3 1/2 x 7 1/8 x 1 7/8 inches)

- Remote control connector: 6-pin

- Output connector: BNC type



VCL-0716BXA 1/2 Type Bayonet Mount Lens



Applicable Models

- DXC-990 3-CCD Color Video Camera
- DXC-990P 3-CCD Color Video Camera

Supplied Accessories

- Lens cap (front) (1)
- Operation manual (1)
- Lens cap (rear) (1)

Specifications

- Type 1/2 type
- Focal length 7.3 to 117 mm
- Zoom ratio 16x
- Maximum relative aperture F1.9 (7.3 to 98 mm) to F2.3 (117 mm)
- Flange focal length (in air) 38 mm (adjustable range: +/-0.3 mm)

Minimum object distance

- 1 m (0.04 m in macro operation)

Angle of view

- Horizontal: 47°20' to 3°08'
- Vertical: 36°24' to 2°21'
- Diagonal: 57°26' to 3°55'

Iris control

- Manual, Auto, Remote control from camera or control box

Zoom control

- Manual, Remote control from control box

Focus control

- Manual, Remote control from control box

Power requirements

- DC 12 V

Current consumption

- 70 mA (Quiescent), 350 mA (Maximum)

Mount

- Bayonet mount

Mass

- Approx. 870 g (1 lb 15 oz)

Dimensions (W x H x D)

- 90.5 x 75 x 144.2 mm (3 5/8 x 3 x 5 3/4 inches), without lens hood

\* Zoom/Focus/Iris functions can be remotely controlled from RM-C950.

## Camera Accessories/Peripherals

### VCL-616WEA 1/3 Type C-mount Lens



#### Supplied Accessories

Lens hood (1)  
 Lens cap (front) (1)  
 Lens cap (rear) (1)  
 Operation manual (1)

#### Specifications

Application  
 1/3 type format 3CCD color camera  
 Focal length  
 5.5 to 88 mm  
 Zoom ratio  
 16x  
 Maximum relative aperture  
 F1.4 (5.5 mm) to F1.8 (88 mm)  
 Iris range  
 F1.4 to F16, closed

Flange focal length (in air)  
 17.526 +/-0.05 mm (adjustable range:  
 +/-0.20 mm)  
 Minimum object distance  
 1.0 m  
 Angle of view  
 Horizontal: 47°09' to 3°07'  
 Vertical: 36°15' to 2°21'  
 Iris control  
 Manual, Auto, Remote control from camera  
 or control box  
 Zoom control  
 Manual, Remote control from control box  
 Focus control  
 Manual, Remote control from control box  
 Power requirements  
 DC 12 V  
 Maximum current consumption  
 400 mA

Mount  
 C mount  
 Mass  
 Approx. 900 g (1 lb 16 oz), without lens  
 hood  
 Dimensions (W x H x D)  
 100 x 108 x 198.8 mm (4 x 4 1/4 x 7 7/8  
 inches)

Camera Accessories/Peripherals

### VCS-700 Video Selector

#### Features

●Routes video output of multiple cameras for picture and waveform monitoring ●Accepts up to six picture and waveform inputs ●Video output selectable from the MSU-700A/750 or external control equipment through the 37-pin I/O port ●Two picture and waveform outputs available for different system applications



#### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
 BVP-E30P 3-chip CCD Portable Color Camera  
 BVP-E30WS 3-chip CCD Portable Color Camera  
 BVP-E30WSP 3-chip CCD Portable Color Camera

#### Supplied Accessories

AC power cord (1)  
 Plug holder for the AC power cord (1)  
 4-pin connector (1)  
 Operation manual (1)  
 Maintenance manual (1)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power requirements:  
 100 to 120 V AC, 50/60 Hz  
 Power consumption:  
 0.28 VA

Operating temperature:  
 5 to +45 °C (73 to +113 °F)  
 Mass:  
 5.2 kg (11 lb 7 oz)  
 Dimensions:  
 424(W) x 44(H) x 400(D)mm  
 (16 3/4 x 1 3/4 x 15 3/4 inches)

#### Input connectors

PIX 1 to PIX 6 input:  
 BNC type (6)  
 WF 1 to WF 6 input:  
 BNC type (6)  
 1.0 Vp-p(VBS)/0.714 Vp-p(V), 75 Ω  
 PIX A input:  
 BNC type (1) 1.0 Vp-p(VBS), 75 Ω  
 WF A input:  
 BNC type (1) 1.0 Vp-p(VBS), 75 Ω  
 CHARACTER input:  
 BNC type (1, with loop-through output) 0.7  
 Vp-p(V), 75 Ω  
 AC in:  
 3-pin

#### Output connectors

PIX A and PIX B output:  
 BNC type (1 each), 1.0 Vp-p(VBS), 75 Ω  
 WF A and WF B output:  
 1.0 Vp-p(VBS)/0.714 Vp-p(V), 75 Ω  
 SYNC output:  
 BNC type (1)  
 0.3 Vp-p (VBS), 75 Ω, negative polarity  
 WF mode:  
 round 4-pin connector (1)  
**Remote connectors**  
 REMOTE:  
 8-pin multiconnectors (1)  
 I/O PORT:  
 D-sub 37-pin(1)

## Camera Accessories/Peripherals

### VCS-700 Video Selector

#### Features

●Routes video output of multiple cameras for picture and waveform monitoring ●Accepts up to six picture and waveform inputs ●Video output selectable from the MSU-700A/750 or external control equipment through the 37-pin I/O port ●Two picture and waveform outputs available for different system applications



#### Supplied Accessories

AC power cord (1)  
Plug holder for the AC power cord (1)  
4-pin connector (1)  
Operation manual (1)  
Maintenance manual (1)

#### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

#### Specifications

##### General

Power requirements:

220 to 240 V AC, 50/60 Hz

Power consumption:

0.28 VA

Operating temperature:

5 to +45 °C (73 to +113 °F)

Mass:

5.2 kg (11 lb 7 oz)

Dimensions:

424(W) x 44(H) x 400(D)mm

(16 3/4 x 1 3/4 x 15 3/4 inches)

#### Input connectors

PIX 1 to PIX 6 input:

BNC type (6)

WF 1 to WF 6 input:

BNC type (6)

1.0 Vp-p(VBS)/0.7 Vp-p(V), 75 Ω

PIX A input:

BNC type (1) 1.0 Vp-p(VBS), 75 Ω

WF A input:

BNC type (1) 1.0 Vp-p(VBS), 75 Ω

CHARACTER input:

BNC type (1, with loop-through output) 0.7 Vp-p(V), 75 Ω

AC in:

3-pin

#### Output connectors

PIX A and PIX B output:

BNC type (1 each), 1.0 Vp-p(VBS), 75 Ω

WF A and WF B output:

1.0 Vp-p(VBS)/0.7 Vp-p(V), 75 Ω

SYNC output:

BNC type (1)

0.3 Vp-p(VBS), 75 Ω, negative polarity

WF mode:

round 4-pin connector (1)

#### Remote connectors

REMOTE:

8-pin multiconnectors (1)

I/O PORT:

D-sub 37-pin(1)

### VCT-14 Tripod Adaptor



#### Applicable Models

BVP-950 3-chip CCD Studio/OB Camera  
BVP-950P 3-chip CCD Studio/OB Camera  
BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera  
DNW-7 Betacam SX Camcorder  
DNW-7P Betacam SX Camcorder  
DNW-90WS Betacam SX Camcorder  
DNW-90WSP Betacam SX Camcorder  
DNW-9WS Betacam SX Camcorder  
DNW-9WSP Betacam SX Camcorder  
DVW-970 Digital Betacam Camcorder  
DVW-970P Digital Betacam Camcorder  
HDC1500 Multi-format HD Camera  
HDC-930 Multi-format HD Camera  
HDC-950 Multi-format HD Camera

HDW-730S HDCAM Camcorder  
HDW-750 HDCAM Camcorder  
HDW-750P HDCAM Camcorder  
HDW-F900H HDCAM Camcorder  
MSW-970 MPEG IMX camcorder  
MSW-970P MPEG IMX camcorder PAL model  
PDW-510 XDCAM Camcorder (DVCAM Recording)  
PDW-510P XDCAM Camcorder (DVCAM Recording)  
PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)

#### Specifications

Dimensions:

282(W) x 27(H) x 80(D)mm

(11 1/8 x 1 1/8 x 3 1/4 inches)

Mass:

900 g (2 lb)

## Camera Accessories/Peripherals

### VCT-U14 Tripod Adaptor

Tripod adaptor for

DXC-D50/D50P/D50WS/D50WSP/D35/D35P/D35WS/D35WSP/ 327B/327BP, UVW-100B/100BP, DSR-300A/300AP/370/370P/390/390P/500WS/500WSP/570WS/570WSP

#### Features

- Adjustable camera position with screws

#### Applicable Models

DSR-250 DVCAM Camcorder  
DSR-250P DVCAM Camcorder  
DXC-D50H 3-chip CCD Portable Color Camera  
DXC-D50K 3-chip CCD Portable Color Camera  
DXC-D50L 3-chip CCD Portable Color Camera  
DXC-D50PH 3-chip CCD Portable Color Camera  
DXC-D50PK 3-chip CCD Portable Color Camera  
DXC-D50PL 3-chip CCD Portable Color Camera  
DXC-D50WSH 3-chip CCD Portable Color Camera  
DXC-D50WSL 3-chip CCD Portable Color Camera  
DXC-D50WSPL 3-chip CCD Portable Color Camera  
HDC-X300 HD Multi-purpose Camera  
HDC-X300K HD Multi-purpose Camera  
HDC-X310 HD Multi-purpose Camera  
HDC-X310K HD Multi-purpose Camera

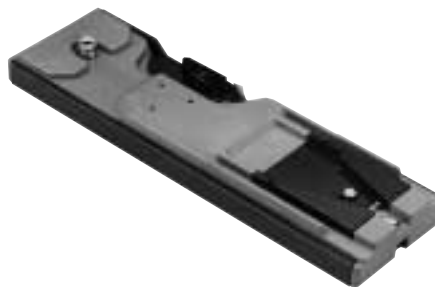
#### Specifications

Dimensions:

282 (W) × 27 (H) × 80 (D) mm  
(11 1/8 × 11/8 × 3 1/4 inches)

Mass:

Approx. 900 g (2 lb)



### VFH-550 5-inch Type Viewfinder Sports Hood

5-inch type viewfinder sports hood for BVF-55 series

#### Applicable Models

BVP-950 3-chip CCD Studio/OB Camera  
BVP-9500WS Super Motion Video Camera  
BVP-9500WSP Super Motion Video Camera  
BVP-950P 3-chip CCD Studio/OB Camera



### VFH-770 7-inch Type Viewfinder Sports Hood

7-inch type viewfinder sports hood for BVF-7700/77 series

#### Applicable Models

BVP-900 3-chip CCD Studio/OB Camera  
System  
BVP-900P 3-chip CCD Studio/OB Camera  
System  
BVP-9500WS Super Motion Video Camera  
BVP-9500WSP Super Motion Video Camera  
HDC-900 Multi-format HD Camera  
HDC-910 Multi-format HD Camera  
HDVF-700A 7-inch Type HD B/W CRT  
Viewfinder



## Camera Accessories/Peripherals

# WLL-CA50 Wireless Camera Transmitter (UC)

### Features

- Wireless camera transmitter connected to either a Digital Betacam, Betacam SX, MPEG IMX, or XDCAM camcorder, and used with the WLL-RX50/RX55 wireless camera receiver
- MPEG-2 video compression and MPEG-1 Layer I/II 48-kHz audio
- COFDM for stable transmission
- Time interleave
- Secure encryption key
- 2.4 GHz band transmission frequency allows a license-free operation
- Cable-free camcorder connection
- Flexible channel selector (up to 6 simultaneous channels)
- User-friendly menu
- Low power consumption

### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-970 Digital Betacam Camcorder  
 MSW-970 MPEG IMX camcorder  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 WLL-RX55 Wireless Camera Receiver

### Supplied Accessories

Transmission antenna (1)

### Optional Accessories

WLL-RX55 Wireless Camera Receiver  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-L40A Rechargeable Lithium-ion Battery Pack  
 BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 BC-L70 Li-ion Battery Charger  
 AC-550 AC Adaptor  
 AC-DN2B AC Adaptor  
 AC-DN10 AC Adaptor/Charger

### Specifications

#### General

Power requirement:

12 V DC

Power consumption:

9W

Operating temperature:

0 °C to +40 °C (+32 °F to +104 °F)

Dimension (w x h x d):

97 x 209 x 152 (mm),

3 7/8 x 8 1/4 x 6 (inches)

Mass (excluding antenna):

1.2 kg (2 lb 10 oz)



## Camera Accessories/Peripherals

# WLL-CA50 Wireless Camera Transmitter (CER)

### Features

- Wireless camera transmitter connected to either a Digital Betacam, Betacam SX, MPEG IMX , or XDCAM camcorder, and used with the WLL-RX50/RX55 wireless camera receiver
- MPEG-2 video compression and MPEG-1 Layer I/II 48-kHz audio
- COFDM for stable transmission
- Time interleave
- Secure encryption key
- 2.4 GHz band transmission frequency allows a license-free operation
- Cable-free camcorder connection
- Flexible channel selector (up to 6 simultaneous channels)
- User-friendly menu
- Low power consumption

### Applicable Models

DNW-7P Betacam SX Camcorder  
 DNW-90WSP Betacam SX Camcorder  
 DNW-9WSP Betacam SX Camcorder  
 DVW-707P Digital Betacam Camcorder  
 DVW-709WSP Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WSP Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-970P Digital Betacam Camcorder  
 MSW-970 MPEG IMX camcorder  
 MSW-970P MPEG IMX camcorder PAL model  
 PDW-510P XDCAM Camcorder (DVCAM Recording)  
 PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 WLL-RX55 Wireless Camera Receiver

### Supplied Accessories

Transmission antenna (1)

### Optional Accessories

WLL-RX55 Wireless Camera Receiver  
 MSB-2000 Multi-format stream-bridging unit  
 BDV-D1000 MPEG Decoder Unit  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-L40A Rechargeable Lithium-ion Battery Pack  
 BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 BC-L70 Li-ion Battery Charger  
 AC-550CE AC Adaptor  
 AC-DN2B AC Adaptor  
 AC-DN10 AC Adaptor/Charger

### Specifications

#### General

Power requirement:

12 V DC

Power consumption:

9W

Operating temperature:

0 °C to +40 °C (+32 °F to +104 °F)

Dimension (w x h x d):

97 x 209 x 152 (mm),

3 7/8 x 8 1/4 x 6 (inches)

Mass (excluding antenna):

1.2 kg (2 lb 10 oz)



## Camera Accessories/Peripherals

# WLL-CA55 Wireless Camera Transmitter (UC)

### Features

- Wireless camera transmitter connected to either a BVP-E10, BVP-E30, BVP-550, BVP-570 or BVP-950 camera, and used with the WLL-RX55 Receiver
- MPEG-2 broadcast quality video and MPEG-1 Layer I/II 48-kHz audio transmission
- Stable transmission using COFDM technology
- Time interleave
- 2.4 GHz band transmission frequency allows a license-free operation
- Secure encryption key
- Cable-free camera connection
- Full camera remote control capability
- Full camera genlock
- Flexible channel selector (up to 6 simultaneous channels)
- User-friendly menu
- Transmission status display in viewfinder
- Low power consumption



### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera  
WLL-RX55 Wireless Camera Receiver

### Supplied Accessories

Transmission antenna (1)  
Operation manual (1)

### Optional Accessories

BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-L40A Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
AC-550 AC Adaptor  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (66U)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
WRR-855B UHF Synthesized Diversity Tuner (1416U)  
WRR-855B UHF Synthesized Diversity Tuner (3032U)  
WRR-855B UHF Synthesized Diversity Tuner (6264U)  
WRR-855B UHF Synthesized Diversity Tuner (6668U)

### Specifications

#### General

Power requirements:  
DC 12 V  
Power consumption:  
15 W  
Operating temperature:  
-20 °C to +45 °C (-4 °F to +113 °F)  
Dimensions (W x H x D):  
132 x 214 x 176 mm (5 1/4 x 8 1/2 x 7 inches)  
Mass (excluding antenna):  
2 kg (4 lb 7 oz)

#### RF block

Transmission frequency range:  
2402 to 2470 MHz (USA and Canada)  
2402 to 2482 MHz (Other countries)  
Transmission center frequency range:  
2406 to 2466 MHz (USA and Canada)  
2406 to 2478 MHz (Other countries)  
Transmission mode:  
Standard/Robust/High-picture/Standard-LD (low delay)/Robust-LD (low delay)  
Minimum system delay (Time interleave mode: off):  
2.3 frames (\*)  
Modulation:  
16 QAM-COFDM, QPSK-COFDM  
Occupied bandwidth:  
8 MHz  
Channel spacing:  
12 MHz  
RF power output:  
40 mW (EIRP=100 mW)  
Antenna gain:  
4.0 dBi  
Antenna directivity:  
Omni-directional

## Camera Accessories/Peripherals

# WLL-CA55 Wireless Camera Transmitter (CER)

### Features

- Wireless camera transmitter connected to either a BVP-E10, BVP-E30, BVP-550, BVP-570 or BVP-950 camera, and used with the WLL-RX55 Receiver
- MPEG-2 broadcast quality video and MPEG-1 Layer I/II 48-kHz audio transmission
- Stable transmission using COFDM technology
- Time interleave
- 2.4 GHz band transmission frequency allows a license-free operation
- Secure encryption key
- Cable-free camera connection
- Full camera remote control capability
- Full camera genlock
- Flexible channel selector (up to 6 simultaneous channels)
- User-friendly menu
- Transmission status display in viewfinder
- Low power consumption



Camera Accessories/Peripherals

### Applicable Models

BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera  
WLL-RX55 Wireless Camera Receiver

### Supplied Accessories

Transmission antenna (1)  
Operation manual (1)

### Optional Accessories

BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-L40A Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
AC-550CE AC Adaptor  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)

### Specifications

#### General

Power requirements:  
DC 12 V  
Power consumption:  
15 W

#### Operating temperature:

-20 °C to +45 °C (-4 °F to +113 °F)

#### Dimensions (W x H x D):

132 x 214 x 176 mm (5 1/4 x 8 1/2 x 7 inches)

#### Mass (excluding antenna):

2 kg (4 lb 7 oz)

#### RF block

##### Transmission frequency range:

2402 to 2470 MHz (USA and Canada)  
2402 to 2482 MHz (Other countries)

##### Transmission center frequency range:

2406 to 2466 MHz (USA and Canada)  
2406 to 2478 MHz (Other countries)

##### Transmission mode:

Standard/Robust/High-picture/Standard-LD (low delay)/Robust-LD (low delay)

##### Minimum system delay (Time interleave mode: off):

2.3 frames (\*)

##### Modulation:

16 QAM-COFDM, QPSK-COFDM

##### Occupied bandwidth:

8 MHz

##### Channel spacing:

12 MHz

##### RF power output:

4 mW (EIRP=10 mW)

##### Antenna gain:

4.0 dBi

##### Antenna directivity:

Omni-directional

## Camera Accessories/Peripherals

### WLL-RX55 Wireless Camera Receiver

#### Features

- Wireless camera receiver, designed to be used with the WLL-CA50/CA55
- Diversity reception
- MPEG-2 video compression and MPEG-1 Layer I/II 48-kHz audio
- COFDM for stable transmission\*Time interleave
- 2.4 GHz band transmission frequency allows a license-free operation
- Secure encryption key
- Flexible channel selector (up to 6 simultaneous channels)
- Wireless camera control capability
- User-friendly menu
- Versatile antenna unit



#### Supplied Accessories

Reception antenna (2)  
 Down converter (2)  
 Mounting bracket (2)  
 Mounting screw: M3 (4)  
 Mounting screw: M4 (8)  
 Coaxial cable with N-type connectors (10 m)  
 (2)  
 4-pin connector (1)  
 Fasten belt (1)  
 Camera number plate (1)  
 Operation manual (1)

#### Optional Accessories

RM-B750 Remote Control Unit  
 WLL-CA50 Wireless Camera Transmitter (CER)  
 WLL-CA50 Wireless Camera Transmitter (UC)  
 WLL-CA55 Wireless Camera Transmitter (CER)  
 WLL-CA55 Wireless Camera Transmitter (UC)  
 RM-B150 Remote Control Unit  
 RCP-750 Remote Control Panel (Joystick type)  
 RCP-751 Remote Control Panel (Dial control type)  
 WRT-8B UHF Synthesized Transmitter (6668U)  
 WRT-8B UHF Synthesized Transmitter (62CE7)  
 WRT-8B UHF Synthesized Transmitter (6264U)  
 WRT-8B UHF Synthesized Transmitter (AU)  
 WRT-8B UHF Synthesized Transmitter (67CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (62CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (AU)  
 WRT-822A UHF Synthesized Wireless Transmitter (66U)  
 WRT-822A UHF Synthesized Wireless Transmitter (68U)  
 WRT-822A UHF Synthesized Wireless Transmitter (69CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (KR)  
 WRT-822B UHF Synthesized Wireless Transmitter (21CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (33CE7)  
 WRT-822B UHF Synthesized Wireless Transmitter (67CE7)  
 WRT-822A UHF Synthesized Wireless Transmitter (64U)  
 WRT-822B UHF Synthesized Wireless Transmitter (62CE7)

Camera Accessories/Peripherals

Specifications

General

Power requirements:  
AC 100 to 240 V, 50/60 Hz or DC 12 V  
Power consumption:  
66 W  
Operating temperature:  
5 to 40 °C (41 to 104 °F)  
Storage temperature:  
-20 to +60 °C (-4 to +140 °F)  
Dimensions (W x H x D):  
200 x 127 x 365 mm (7 7/8 x 5 x 14 3/8 inches)  
Mass:  
5 kg (11 lb)

Reception system

Receiving center frequency range:  
2406 to 2478 MHz  
Occupied bandwidth:  
8 MHz  
Channel spacing:  
12 MHz  
Antenna gain:  
9.0 dBi  
Antenna directivity:  
60°  
Modulation:  
16QAM-COFDM, QPSK-COFDM  
IF center frequency:  
326 to 398 MHz  
IF input connector:  
N-type special connector x 2, 50 Ω  
IF output connector:  
N type special connector x 2, 50 Ω, loop through

Input/output

Bitstream input:  
Data format  
DVB-ASI  
Connector  
BNC x 2, 75 Ω  
Bitstream output:  
Data format  
DVB-ASI  
Connector  
BNC x 2, 75 Ω  
Sync signal input:  
Reference input  
BNC x 2, VBS/BS: 1.0 Vp-p, 75 Ω, loop through  
Digital signal output:  
SDI/ASI output  
BNC x 3, transmission cable length:  
max. 200 m  
SDI: 4:2:2 component serial digital (270 Mb/s), 0.8 Vp-p, 75 Ω  
ASI: DVB-ASI, EN50083-9 (DVB-PI-232 Revised TM Rev.2)  
Transmission mode: Data-packet mode (188 bytes)

Analog signal output

Video 1  
BNC, 1.0 Vp-p, 75 Ω  
Video 2  
BNC, 1.0 Vp-p, 75 Ω  
Video 3  
BNC, 1.0 Vp-p, 75 Ω  
PIX  
BNC, 1.0 Vp-p, 75 Ω  
WF  
BNC, Encode output: 1.0 Vp-p, 75 Ω  
WF mode  
4-pin

Audio output  
XLR-3-pin x 2, 0 dBu/-20 dBu balanced  
Other input/output  
DC input:  
XLR-4-pin (for the optional AC-550/550CE),  
DC 10.5 to 17 V  
DC output:  
4-pin (for wireless microphone transmitter)  
(Max. 200 mA)  
Remote:  
8-pin  
Intercom/Tally/Program:  
D-sub 25-pin, 4W/RTS,  
Tally: DC 24 V, TTL level, or contact selectable  
Mic remote:  
D-sub 15-pin  
Intercom (front):  
XLR-5-pin  
Camera control:  
XLR-3-pin

Camera Accessories/Peripherals



Camera Accessories/Peripherals

HDCAM Camcorders

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## HDCAM Camcorders

### HDW-730S HDCAM Camcorder

The HDW-730S is an HDCAM camcorder that is offered at a price point comparable to high-end SD camcorders by specifically focusing on 1080/60i or 1080/50i acquisition. Equipped with a number of unique features to powerfully assist even the harshest shooting environments, plus the outstanding picture performance that all HDCAM camcorders provide, the HDW-730S is the ideal camcorder to support migration to the next generation of ENG, EFP, and general HD acquisition applications.

#### Features

●2.2 million-pixel 2/3-inch type IT Power HAD CCD  
 ●Ultimate Sensitivity (with the HKDW-705 Slow Shutter Board) ●Reduced risk of missing scenes (with the HKDW-703 Picture Cache Board) ●Long Recording Time  
 ●Rugged and Ergonomic Design ●Versatile Monitoring Capability ●Shot Mark Handling ●Quick Setup ●Single Optical Filter Wheel

#### Supplied Accessories

HDVF-20A 2-inch Type HD B/W CRT  
 Viewfinder (1)  
 Shoulder Strap (1)  
 Monaural microphone, Ultra directional (1)  
 Lens mount securing rubber (1)  
 Operation Manual (1)

#### Optional Accessories

HKDW-702 Down Converter Board  
 HKDW-703 Picture Cache Board  
 HKDW-704 GPS Unit  
 HKDW-705 Slow Shutter Board  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 AC-DN10 AC Adaptor/Charger  
 AC-DN2B AC Adaptor  
 BC-L70 Li-ion Battery Charger  
 BC-M50 Ni-MH & Li-ion Battery Charger  
 BC-M150 Ni-MH & Li-ion Battery Charger  
 RM-B750 Remote Control Unit  
 RM-B150 Remote Control Unit  
 HDVF-C30W Multi-format HD Color LCD Viewfinder  
 BKW-401 Viewfinder Rotation Bracket  
 VCT-14 Tripod Adaptor  
 BVM-D9H5U Color Video Monitor  
 VF-508 Monitor ENG Kit  
 MSH "Memory Stick" IC Memory Media  
 MSA-A "Memory Stick" IC Memory Media  
 ECM-678 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (E)  
 ECM-670 Electret Condenser Microphone (E)  
 CCXA Cable Audio Cable  
 WRR-855A UHF Synthesized Diversity Tuner (64U)

WRR-855A UHF Synthesized Diversity Tuner (AU)  
 WRR-855A UHF Synthesized Diversity Tuner (68U)  
 WRR-855A UHF Synthesized Diversity Tuner (KR)  
 WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (1416U)  
 WRR-855B UHF Synthesized Diversity Tuner (3032U)  
 WRR-855B UHF Synthesized Diversity Tuner (6264U)  
 WRR-855B UHF Synthesized Diversity Tuner (6668U)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)



Lens, battery and WRR-855A Wireless Tuner are optional.

HDCAM Camcorders

Specifications

General

Mass:  
Approx. 3.7 kg (8 lb 3 oz): Main Body,  
Approx. 5.3 kg (11 lb 14 oz) (with MIC, VF,  
BCT-40HD and BP-GL95)

Dimensions:  
127 x 206 x 308 mm (5 x 8 1/8 x 12 1/4  
inch)

Power requirements:  
DC 12V + 5.0 V/-1.0 V

Power consumption:  
33 W (with 12V power supply, REC mode,  
without VF)

Operating temperature:  
0 °C to +40 °C (32 °F to + 104 °F)

Storage temperature:  
-20 °C to + 60 °C (-4 °F to + 140 °F)

Humidity:  
25% to 85% (relative humidity)

Continuous operating time:  
Approx. 135 min with BP-GL95

**Input/Output connectors**

Genlock video input:  
BNC type x 1, 1.0 Vp-p, 75 Ω

Time code input:  
BNC type x 1, 0.5 V to 18 Vp-p, 10 kΩ

Mic input:  
XLR-3-pin type x 1 (Female), -60 dBu

Test output:  
BNC type x 1, 1.0 Vp-p, 75 Ω, unbalanced

VBS/SDI output (option: HKDW-702):  
BNC type x 1, 75 Ω  
VBS out: 1.0 Vp-p  
SDI out: 0.8 Vp-p

HD-SDI output:  
BNC type (x 1), 0.8 Vp-p, 75 Ω,  
unbalanced

Audio output:  
XLR-5-pin type x 1 (Male), 0 dBm

Time code output:  
BNC type x 1, 1.0 Vp-p, 75 Ω

Earphone:  
Mini Jack x 2, 8 Ω, -∞ to -18 dBs variable

Lens:  
12-pin

Remote:  
8-pin

Light:  
2-pin, DC 12 V, max. 50 W

DC input:  
XLR-4-pin type (Male), DC 11 V to 17 V

DC output  
4-pin (for wireless microphone receiver),  
DC 11 V to 17 V, maximum current 0.1 A

**VTR section**

Recording format:  
HDCAM

Tape speed:  
Approx. 96.7 mm/s (at 30 frames) (at  
59.94i format)  
Approx. 80.6 mm/s (at 25 frames) (at 50i  
format)

Playback/Recording time:  
Max. 40 min. with BCT-40HD (at 59.94i  
format)  
Max. 48 min. with BCT-40HD (at 50i  
format)

Fast forward/rewind:  
Approx. 5 min. with BCT-40HD

Recommended tape:  
Approx. 5 min. with BCT-40HD

Digital video performance

Sampling frequency:  
Y: 74.25 MHz, PB/PR: 37.125 MHz

Quantization:  
10 bits/sample (8 bits/sample for  
compression processing)

Channel coding:  
S-NRZI PR-IV

Compression:  
Coefficient recording system

Error correction:  
Reed-Solomon code

Error concealment:  
Adaptive three dimensional

**Audio performance**

Frequency response:  
20 Hz to 20 kHz, + 0.5 dB/-1.0 dB

Dynamic range:  
More than 85 dB (emphasis ON)

Distortion (at 1kHz, emphasis ON, reference  
level):  
Less than 0.08%

Cross talk (at 1 kHz, reference level):  
Less than -70 dB

Wow and flutter:  
Below measurable limit

Camera section (Performance)

Pickup device:  
3-chip 2/3-inch type IT CCD

Effective picture elements:  
1920 (H) x 1080 (V)

Optical system:  
F1.4 prism (Equipped with Quarz Filter)

Lens mount:  
Special bayonet mount

Built-in filters:  
1: Clear, 2: 5600K+1/8ND, 3: 5600K, 4:  
5600K+1/64ND

Sensitivity (2000 lx, 89.9% reflectance):  
F10.0 (typical) Equivalent to ISO 600 or  
more

Minimum illumination:  
Approx. 0.3 lx (F1.4 lens, +42 dB turbo  
gain)

Smear level:  
-125 dB

S/N ratio:  
54 dB (typical)

Modulation depth at 5 MHz:  
45% +/-5%

Horizontal resolution:  
1000 TV lines

Shutter speed:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000  
(s) (at 59.94i format)  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000  
(s) (at 50i format)

Clear Scan:  
60 Hz to 4300 Hz (at 59.94i format)

Programmable Gain:  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42 dB

**Viewfinder**

CRT:  
2.0-inch monochrome

Controls:  
BRIGHT, CONTRAST, PEAKING controls  
TALLY, ZEBRA, DISPLAY/ASPECT switches

Horizontal resolution:  
500 TV lines (16:9, at center)

Microphone:  
Ultra-directional monaural microphone  
(Detachable)

## HDCAM Camcorders

### HDW-750 HDCAM Camcorder

#### Features

- Combines an HD color video camera head with an HDCAM portable video cassette recorder
- Incorporates three 2/3-inch type Power HAD FIT CCD imagers each with 2,200,000 pixels that conform to 1920(H) x 1080(V) CIF (Common Image Format)
- 10-bit A/D converter and Advanced Digital Signal Processor (ADSP) for excellent picture quality
- Superb recording quality and high reliability of the HDCAM format in the VTR section
- Provides excellent portability and a dust and drip-proof design for use in High Definition ENG, EFP and the other applications
- A new method of processing HD digital signals further improves image quality and simplifies setup operations
- Existing 2/3-inch lens can be used
- Slot-in mechanism to accommodate an optional WRR-855A/855B and WRR-862A/862B Wireless Microphone Receiver
- Picture cache function (optional) to avoid missing the start of an important shot
- Memory stick setup system can memorize and recall various parameter settings
- Electronic shutter includes ECS and S-EVS functions to provide motion blur-free images in any situation
- HD SDI output provided as standard
- Down converted SD-SDI or analog composite out (option)
- Dual filter wheels for Neutral density and Color temperature control
- A simple switch operation enables automatic adjustment of black set, black balance and white balance
- Various warning indicators



Lens, battery and WRR-855 Wireless Tuner are optional.

#### Supplied Accessories

HDVF-20A 2-inch Type HD B/W CRT Viewfinder (1)  
Shoulder Strap (1)  
Stereo microphone (super cardioid directional) (1)  
Lens mount securing rubber (1)  
Operation Manual (1)

#### Optional Accessories

HKDW-702 Down Converter Board  
HKDW-703 Picture Cache Board  
HKDW-704 GPS Unit  
HKDW-705 Slow Shutter Board  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
BC-L70 Li-ion Battery Charger  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
HDVF-C30W Multi-format HD Color LCD Viewfinder  
BKW-401 Viewfinder Rotation Bracket  
VCT-14 Tripod Adaptor  
BVM-D9H5U Color Video Monitor  
VF-508 Monitor ENG Kit  
MSH "Memory Stick" IC Memory Media  
MSA-A "Memory Stick" IC Memory Media  
CCXA Cable Audio Cable  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (AU)

WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-855B UHF Synthesized Diversity Tuner (1416U)  
WRR-855B UHF Synthesized Diversity Tuner (3032U)  
WRR-855B UHF Synthesized Diversity Tuner (6264U)  
WRR-855B UHF Synthesized Diversity Tuner (6668U)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

# HDCAM Camcorders

## Specifications

### General

Power voltage:  
12 +0.5/-1.0V DC

Power consumption:  
34 W (with 12 V DC supply, when recording without HDVF-20A)

Operating temperature:  
0 °C to 40 °C (32 °F to 104 °F)

Operating humidity:  
25% to 85% (relative humidity)

Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)

Mass:  
Approx. 5.3 kg (11 lb 14oz) (with viewfinder, cassette, and BP-GL95 Battery Pack)

### Video Camera Section

Imager:  
2/3-inch type FIT CCD with 2,200,000 pixels

Effective picture elements:  
1920 (H ) x 1080 (V)

Imager Configuration:  
RGB 3-CCD

Spectral system:  
F1.4 prism system (with quartz filter)

Built-in filters  
CC filter:  
A: Cross filter  
B: 3200K  
C: 4300K  
D: 6300K  
ND filter:  
1: Clear  
2: 1/4 ND  
3: 1/16 ND  
4: 1/64 ND

Lens mount:  
Special bayonet type

Sensitivity:  
89.9% reflection chart, 2000 lx (F10 standard)

Minimum Illumination:  
Approx. 0.3 lx (F 1.4 lens, +42 dB turbo gain)

Smear Level:  
-135 dB (typical)

S/N ratio:  
54 dB (typical)

Modulation depth at 5 MHz:  
45% ±5%

Horizontal resolution:  
1000 TV lines

Shutter speed:  
1/100, 1/124, 1/250, 1/500, 1/1000, 1/2000 (s)

Clear Scan:  
60 Hz to 4300 Hz

Programmable Gain:  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42 dB (select in camera set up menu for L/M/H/TURBO)

### VTR Section

Usable cassette tapes:  
BCT-22HD/40HD 1/2-inch HDCAM cassette tapes

Tape speed:  
Approx. 96.7 mm/s

Record/playback time:  
40 minutes with BCT-40HD

Fast forward time:  
Approx. 5 minutes (using BCT-40HD video cassette)

Rewind time:  
Approx. 5 minutes (using BCT-40HD video cassette)

Continuous recording time:  
Approx. 110 minutes (using BP-L60A Battery Pack)

**Digital video signal**

Sampling frequency:  
Y: 74.25 MHz, PB/PR: 37.125 MHz

Quantization:  
10 bits/sample (8 bits/sample for compression processing)

Compression:  
Coefficient recording system

Channel coding:  
S-NRZI PR-IV

Error correction:  
Reed-Solomon code

Error concealment:  
Adaptive three dimensional

**Audio (with standard playback machine)**

Frequency response:  
20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range:  
85 dB min, (emphasis ON)

Distortion:  
0.08% max

Cross talk:  
-70 dB max

Wow and flutter  
Below measurable limit

**Input/output connectors**

Signal inputs:  
Audio IN CH-1/CH-2 (XLR, 3-pin, female):  
-60 dBu/+4 dBu (0 dBu = 0.775 Vrms)

MIC IN (XLR, 5-pin, female):  
-60 dBu

GENLOCK IN (BNC type):  
1.0 Vp-p, 75 Ω

TC IN (BNC type):  
0.5 V to 18 Vp-p, 10 kΩ

**Signal outputs**

TEST OUT (BNC type):  
1.0 Vp-p, 75 Ω, unbalanced

VBS/SDI OUT (BNC type) (only when the HKDW-702 is installed):  
75 Ω, unbalanced, VBS OUT: 1.0 Vp-p, SDI OUT: 0.8 Vp-p

HD SDI OUT (BNC type):  
0.8 Vp-p, 75 Ω, unbalanced

AUDIO OUT (XLR, 5-pin, male):  
0 dBm

TC OUT (BNC type):  
1.0 Vp-p, 75 Ω

EARPHONE (minijack)  
8 Ω, -∞ to -18 dBs variable

**Others**

DC IN (XLR, 4-pin, male):  
11 to 17 V DC

DC OUT (4-pin):  
11 to 17 V DC, maximum current 0.1A

LENS (12-pin)

REMOTE (8-pin)

## HDCAM Camcorders

# HDW-750P HDCAM Camcorder

### Features

- Combines an HD color video camera head with an HDCAM portable video cassette recorder
- Incorporates three 2/3-inch type Power HAD FIT CCD imagers each with 2,200,000 pixels that conform to 1920(H) x 1080(V) CIF (Common Image Format)
- 10-bit A/D converter and Advanced Digital Signal Processor (ADSP) for excellent picture quality
- Superb recording quality and high reliability of the HDCAM format in the VTR section
- Allows 25PsF and 50i recording at 1920 x 1080 pixel resolutions
- Provides excellent portability and a dust and drip-proof design for use in High Definition ENG, EFP and the other applications
- A new method of processing HD digital signals further improves image quality and simplifies setup operations
- Existing 2/3-inch type lens can be used
- Slot-in mechanism to accommodate an optional WRR-855A/855B Wireless Microphone Receiver
- Picture cache function (optional) to avoid missing the start of an important shot
- Memory stick setup system can memorize and recall various parameter settings
- Electronic shutter includes ECS and S-EVS functions to provide motion blur-free images in any situation
- HD SDI output provided as standard
- Down converted SD-SDI or analog composite out (option)
- Dual filter wheels for Neutral density and Color temperature control
- A simple switch operation enables automatic adjustment of black set, black balance and white balance
- Various warning indicators



Lens, battery and WRR-855 are optional.

### Supplied Accessories

HDVF-20A 2-inch Type HD B/W CRT Viewfinder (1)  
Shoulder Strap (1)  
Stereo microphone (super cardioid directional) (1)  
Lens mount securing rubber (1)  
Operation Manual (1)

### Optional Accessories

HKDW-702 Down Converter Board  
HKDW-703 Picture Cache Board  
HKDW-704 GPS Unit  
HKDW-705 Slow Shutter Board  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
BC-L70 Li-ion Battery Charger  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
HDVF-C30W Multi-format HD Color LCD Viewfinder  
BKW-401 Viewfinder Rotation Bracket  
VCT-14 Tripod Adaptor  
BVM-D9HSU Color Video Monitor  
VF-508 Monitor ENG Kit  
MSH "Memory Stick" IC Memory Media  
MSA-A "Memory Stick" IC Memory Media  
CCXA Cable Audio Cable  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (AU)

WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-855B UHF Synthesized Diversity Tuner (1416U)  
WRR-855B UHF Synthesized Diversity Tuner (3032U)  
WRR-855B UHF Synthesized Diversity Tuner (6264U)  
WRR-855B UHF Synthesized Diversity Tuner (6668U)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
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WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

# HDCAM Camcorders

## Specifications

### General

Power voltage:  
12 +5.0/-1.0

Power consumption:  
34 W (with 12 V DC supply, when recording without HDVF-20A)

Operating temperature:  
0 °C to 40 °C (32 °F to 104 °F)

Operating humidity:  
25% to 85% (relative humidity)

Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)

Mass:  
Approx. 5.3 kg (11 lb 14oz) (with viewfinder, cassette, and BP-GL95 Battery Pack)

### Video Camera Section

Imager:  
2/3-inch type FIT CCD with 2,200,000 pixels

Effective picture elements:  
1920 (H ) x 1080 (V)

Imager Configuration:  
RGB 3-CCD

Spectral system:  
F1.4 prism system (with quartz filter)

Built-in filters  
CC filter:  
A: Cross filter  
B: 3200K  
C: 4300K  
D: 6300K  
ND filter:  
1: Clear  
2: 1/4 ND  
3: 1/16 ND  
4: 1/64 ND

Lens mount:  
Special bayonet type

Sensitivity:  
F10 (Typical) 89.9% reflection chart, 2000 lx

Minimum Illumination:  
Approx. 0.3 lx (F 1.4 lens, +42 dB turbo gain)

Smear Level:  
-135 dB (typical)

S/N ratio:  
54 dB (typical)

Modulation depth at 5 MHz:  
45% ±5%

Horizontal resolution:  
1000 TV lines

Shutter speed:  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s) (at 50i format) 1/33, 1/50, 1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s) (at 25PsF format)

ECS:  
25.0 Hz to 4700 Hz (at 50i format), 25.0 to 2100 Hz (at 25PsF format)

Programmable Gain:  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42 dB (select in camera set up menu for L/M/H/TURBO)

### VTR Section

Usable cassette tapes:  
BCT-22HD/40HD 1/2-inch HDCAM cassette tapes

Tape speed:  
Approx. 80.6 mm/s (at 50i/25PsF format )

Record/playback time:  
Max. 48 min. with BCT-40HD

Fast forward time:  
Approx. 5 minutes (using BCT-40HD video cassette)

Rewind time:  
Approx. 5 minutes (using BCT-40HD video cassette)

Continuous recording time:  
Approx. 90 minutes (using BP-L60A Battery Pack)

### Digital video signal

Sampling frequency:  
Y: 74.25 MHz, PB/PR: 37.125 MHz

Quantization:  
10 bits/sample (8 bits/sample for compression processing)

Compression:  
Coefficient recording system

Channel coding:  
S-NRZI PR-IV

Error correction:  
Reed-Solomon code

Error concealment:  
Adaptive three dimensional

### Audio (with standard playback machine)

Frequency response:  
20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range:  
85 dB min, (emphasis ON)

Distortion:  
0.08% max

Cross talk:  
-70 dB max

Wow and flutter  
Below measurable limit

### Input/output connectors

Signal inputs:  
Audio IN CH-1/CH-2 (XLR, 3-pin, female):  
-60 dBu/+4 dBu (0 dBu = 0.775 Vrms)

MIC IN (XLR, 5-pin, female):  
-60 dBu

GENLOCK IN (BNC type):  
1.0 Vp-p, 75 Ω

TC IN (BNC type):  
0.5 V to 18 Vp-p, 10 kΩ

Signal outputs  
TEST OUT (BNC type):  
1.0 Vp-p, 75 Ω, unbalanced

VBS/SDI OUT (BNC type) (only when the HKDW-702 is installed):  
75 Ω, unbalanced, VBS OUT: 1.0 Vp-p, SDI OUT: 0.8 Vp-p

HD SDI OUT (BNC type):  
0.8 Vp-p, 75 Ω, unbalanced

AUDIO OUT (XLR, 5-pin, male):  
0 dBm

TC OUT (BNC type):  
1.0 Vp-p, 75 Ω

EARPHONE (minijack)  
8 Ω, -∞ to -18 dBs variable

### Others

DC IN (XLR, 4-pin, male):  
11 to 17 V DC

DC OUT (4-pin):  
11 to 17 V DC, maximum current 0.1A

LENS (12-pin)

REMOTE (8-pin)

## HDCAM Camcorders

# HDW-F900H HDCAM Camcorder

### Features

●CineAlta product\*Combines an HD color video camera head with an HDCAM portable video cassette recorder  
 ●Incorporates three 2/3-inch type Power HAD FIT CCD imagers each with 2,200,000 pixels that conform to 1920(H) x 1080(V) CIF (Common Image Format) ●The high quality of 12-bit A/D converter and Advanced Digital Signal Processor (ADSP) make this camcorder ideal for electronic cinematography purposes ●A new method of processing HD digital signals further improves image quality and simplifies setup operations ●Superb recording quality and high reliability of the HDCAM format in the VTR section ●Allows multi-format recording of 23.976/24/25/29.97/30 progressive and 50/59.94/60 interlaced at 1920 x 1080 pixel resolution ●Supports 1080/24PsF format which is defined as ITU-R.BT709-3 HDTV standards for Production and International Program Exchange ●Various cinematography accessories can be attached to its compact, lightweight and robust body ●Memory stick setup system can memorize and recall various parameter settings ●Electronic shutter includes S-EVS function to provide blur-free images in any situation ●A simple switch operation enables automatic adjustment of black set, black balance and white balance ●Various warning indicators ●Dual filter wheels for Neutral density and Color temperature control

### Supplied Accessories

Microphone (super cardioid directional) (1)  
 VCT-14 Tripod Adaptor (1)  
 Shoulder strap (1)  
 Rain cover (1)  
 Operational Manual (1)  
 Maintenance Manual (1)

### Optional Accessories

BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
 AC-DN10 AC Adaptor/Charger  
 AC-550 AC Adaptor  
 BC-L70 Li-ion Battery Charger  
 BC-M50 Ni-MH & Li-ion Battery Charger  
 BC-M150 Ni-MH & Li-ion Battery Charger  
 HDVF-C750W Multi-format HD Color LCD Viewfinder  
 HDVF-C30W Multi-format HD Color LCD Viewfinder  
 HDVF-20A 2-inch Type HD B/W CRT Viewfinder  
 HDCA-901 HD-SDI Adaptor  
 RM-B150 Remote Control Unit  
 RM-B750 Remote Control Unit  
 BCT-HD tapes BCT-HD series HDCAM tapes  
 LC-HD7 Carrying Case  
 CCXA Cable Audio Cable



Lens, battery, CA and viewfinder are optional.

HDCAM Camcorders

Specifications

General

Mass:  
Approx. 7.9 kg (17 lb 10 oz) with lens,  
cassette and BP-GL95

Power requirements:  
DC 12 V (+5.0 V/-1.0 V)

Power consumption:  
40 W (With 12 V power supply, rec mode)

Operating temperature:  
0 °C to +40 °C (+32 °F to +104 °F)

Storage temperature:  
-20 °C to +60 °C (-4 °F to + 140 °F)

Operating humidity:  
25% to 80% (relative humidity)

Continuous operating time:  
Approx. 80 min (with BP-L60A)

Inputs/outputs

Genlock video input:  
BNC, 1.0 Vp-p, 75 Ω

Time code input:  
BNC, 0.5 V to 18 Vp-p, 10 kΩ

Audio CH1/CH2 input:  
XLR-3-31 type (female), -60 dBu/+4dBu  
selectable, high impedance, balanced

MIC input:  
XLR-3-31 type (female), -60 dBu

Monitor output:  
BNC x 3 (Y, PB, PR or R/G/B), 1.0 Vp-p, 75  
Ω, unbalanced

Audio output:  
XLR-3-31 type (female), 0 dBm

Time code output:  
BNC, 1.0 Vp-p, 75 Ω

Earphone:  
Mini-jack, 8 Ω, -∞ to -18 dBs variable

DC input:  
XLR 4-pin (male), 11 to 17 VDC

DC output:  
11 to 17 VDC, Max. 100 mA

Lens:  
12-pin

Remote:  
8-pin

VTR Section

Recording format:  
HDCAM

Tape speed:  
Approx. 77.4 mm/s (24P mode)

Playback/Recording time:  
Max. 50 min with BCT-40HD cassette (24P  
mode)

Fast forward time:  
Approx. 6 min with BCT-40HD

Rewind time:  
Approx. 6 min with BCT-40HD

Recommended tape:  
Sony BCT-40HD/22HD

Sampling frequency:  
Y: 74.25 MHz, PB/PR: 37.125 MHz

Quantization:  
10 bit/sample (8 bit sample for  
compression process)

Error correction:  
Reed-Solomon code

Error concealment:  
Adaptive three dimensional

Digital audio performance

Frequency response:  
20 Hz to 20 kHz, +0.5 dB/-1.0 dB

Dynamic range:  
85 dB min. (emphasis ON)

Distortion:  
0.08 % Max.

Cross talk:  
-70 dB

Wow and flutter:  
Below measurable limit

Camera Section

Pickup device:  
3-chip 2/3-inch FIT type CCD

Picture elements:  
2,200,000

Optical system:  
F1.4 prism

Built-in filters:  
A: 5600 K B: 3200 K C: 4300 K D: 6300  
K 1: Clear 2: 1/4 ND 3: 1/16 ND 4: 1/64  
ND

Shutter speed:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000  
(s)

Clear scan:  
60.0 to 7000 Hz (S-EVS) 0 to 100%

Lens mount:  
Special bayonet mount

Sensitivity:  
F10.0 at 2,000 lux, 89.9% reflective

## HDCAM Camcorders

HDCAM Camcorders

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## XDCAM Camcorders

# PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)

### Features

- MPEG IMX (50/40/30 Mb/s) and DVCAM switchable recording
- Superb picture and sound quality
- 12-bit A/D conversion
- High-performance digital signal processing
- 2/3-inch type 16:9/4:3 widescreen Power HAD EX CCD
- Long recording time; MPEG IMX at 30 Mb/s: 68 min., 40 Mb/s: 55 min., 50 Mb/s: 45 min., DVCAM: 85 min.
- Shock- and dust-resistant disc drive
- 2.5-inch(\*1) type color LCD screen
- Thumbnail Search operation
- Scene Selection operation
- Proxy AV (low-resolution audio and video) Data recording
- Metadata recording including essence mark, UMID, Extended UMID
- Picture cache recording function (up to ten seconds retroactively)
- Progressive mode; NTSC: 29.97P or optional 23.976P(\*2)
- Slow shutter function
- Turbo gain function (max. 48 dB)
- Auto Tracing White Balance (ATW) capability
- Multi-matrix function
- Interval recording function
- Analog composite output as standard
- SDI output and analog composite input as option
- Four assignable buttons
- Slot to accommodate a Sony WRR-855 Series wireless microphone receiver
- Optional Ethernet adaptor
- "Memory Stick" stores camera setup parameters
- Intelligent light system powered from the camcorder's battery
- Dual optical filter wheels for ND and CC
- i.LINK (DV stream) output from MPEG IMX playback
- Camera control from RM-B150/B750
- Compact and lightweight (approx. 5.8 kg including VF, BP-GL95 battery, disc and mic)
- Low power consumption of 36 W

(\*1) Measured diagonally (\*2) Recording to disc is in 59.94i via 2-3 pull-down



Lens, WRR-855A and battery are optional.

XDCAM Camcorders

### Supplied Accessories

Operation manual (1)  
 PDZ-1 proxy browsing software (1)  
 MXF proxy viewer (1)  
 Viewfinder (1)  
 Lens cap (1)  
 Shoulder belt (1)  
 Monaural microphone (1)

### Optional Accessories

CBK-FC01 Pull-down (24P shooting) Board  
 CBK-SC01 Analog Composite Input Board  
 CBK-SD01 SDI Output Board  
 CBK-NC01 Ethernet (100Base-TX) Adaptor  
 CA-701 Camcorder Adaptor  
 CA-702 Camcorder Adaptor  
 WLL-RX55 Wireless Camera Receiver  
 WLL-CA50 Wireless Camera Transmitter (UC)  
 RM-B150 Remote Control Unit  
 RM-B750 Remote Control Unit  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BC-M50 Ni-MH & Li-ion Battery Charger  
 BC-M150 Ni-MH & Li-ion Battery Charger  
 BC-L70 Li-ion Battery Charger  
 AC-550 AC Adaptor  
 AC-DN2B AC Adaptor  
 AC-DN10 AC Adaptor/Charger  
 BVF-VC10W 1.35-inch Type Color Viewfinder  
 BKW-401 Viewfinder Rotation Bracket

VCT-14 Tripod Adaptor  
 PFD23 Disc Professional Disc  
 MSH "Memory Stick" IC Memory Media  
 LC-777 Carrying Case  
 VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
 VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)  
 CCXA Cable Audio Cable  
 DSR-DU1 Video Disk Unit  
 CA-DU1 Camera Adaptor  
 DMX-P01 Portable Digital Mixer  
 WRR-855A UHF Synthesized Diversity Tuner (64U)  
 WRR-855A UHF Synthesized Diversity Tuner (AU)  
 WRR-855A UHF Synthesized Diversity Tuner (68U)  
 WRR-855A UHF Synthesized Diversity Tuner (KR)  
 WRR-855B UHF Synthesized Diversity Tuner (1416U)  
 WRR-855B UHF Synthesized Diversity Tuner (3032U)  
 WRR-855B UHF Synthesized Diversity Tuner (6264U)  
 WRR-855B UHF Synthesized Diversity Tuner (6668U)  
 WRR-861B UHF Synthesized Diversity Tuner (U6264)  
 WRR-861B UHF Synthesized Diversity Tuner (U6668)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

XDCAM Camcorders

Specifications

General

Mass:  
Approx. 4.1 kg (9 lb)  
5.8 kg (12 lb 12 oz, with VF, Mic, Disc,  
BP-GL95 battery)

Power requirements:  
DC 12 V +5.0 V/-1.0 V

Power consumption:  
Approx. 36 W (while recording, with  
viewfinder, color LCD off)

Operating temperature:  
-5 to 40 °C (+23 °F to +104 °F)

Storage temperature:  
-20 to +60 °C (-4 °F to +140 °F)

Humidity:  
10 to 90% (relative humidity)

Continuous operating time:  
Approx. 90 min. w/BP-IL75 battery, approx.  
120 min. w/BP-GL95 battery

Recording format

Video:  
MPEG IMX (50/40/30 Mb/s), DVCAM (25  
Mb/s)

Proxy Video:  
MPEG-4

Audio:  
MPEG IMX: 4 ch/16 bits/48 kHz or 4  
ch/24 bits/48 kHz  
DVCAM: 4 ch/16 bits/48 kHz

Proxy Audio:  
A-law (4ch, 8 bits, 8 kHz)

Recording/playback time

MPEG IMX:  
50 Mb/s: 45 min., 40 Mb/s: 55 min., 30  
Mb/s: 68 min.

DVCAM:  
85 min.

Signal inputs

Genlock video:  
BNC x1, 1.0 Vp-p, 75 Ω

Time code input:  
BNC x1, 0.5 to 18 Vp-p, 10 kΩ

Audio input:  
XLR-3-31 x2, line / mic / mic+48V / AES/EBU  
selectable

Mic input:  
XLR-3-31 x1

Signal outputs

Video output:  
BNC x1, 1.0 Vp-p, 75 Ω

Video test output:  
BNC x1, 1.0 Vp-p, 75 Ω

Time code output:  
BNC x1, 1.0 Vp-p, 75 Ω

Earphone:  
Mini-jack x2 (front: monaural, rear:  
stereo/monaural)

Audio output (CH-1/CH-2):  
XLR 5-pin male (stereo)

Other inputs/outputs

Lens:  
12-pin

Remote:  
8-pin

Light:  
2-pin, DC 12 V, max. 50 W

DC input:  
XLR 4-pin (for the optional AC-550)

DC output:  
4-pin (for wireless microphone receiver), DC  
12 V (MAX 0.2A)

Camcorder adapter:  
40-pin

i.LINK:  
IEEE1394, DV IN/OUT or file access mode,  
6-pin x1

Audio performance

Frequency response:  
20 Hz to 20 kHz, +0.5 dB/-1.0 dB

Dynamic range:  
More than 85 dB

Distortion:  
Less than 0.08% (at 1 kHz, reference level)

Crosstalk:  
Less than -70 dB (at 1 kHz, reference level)

Wow & flutter:  
Below measurable limit

Head room:  
20 dB (ex-factory setting)

Camera section

Pickup device:  
3-chip 2/3-inch type 16:9 widescreen Power  
HAD EX CCD

Total picture elements:  
1038(H) x 1008(V)

Effective picture elements:  
980(H) x 494(V)

Optical system:  
F1.4 prism

Built-in optical filters:  
1 : Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
A: CROSS, B: 3200K, C: 4300K, D: 6300K

Shutter speed:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000  
(s)

Slow shutter:  
1/2 to 1/30 (s) (1 to 8 and 16 frame  
accumulation)

Lens mount:  
2/3" 48 bayonet mount

Sensitivity (2000 lx, 89.9% reflectance):  
F11 (typical)

Minimum illumination:  
Approx. 0.13 lx (F1.4 lens, +48 dB turbo  
gain, shutter off)

Gain selection:  
-3 dB, -0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18  
dB, 24 dB, 30 dB, 36 dB, 42 dB, 48 dB

Smeare level:  
-140 dB (typical)

S/N ratio:  
65 dB (typical)

Vertical resolution  
400 TV Lines/450 TV Lines(EVS)

Registration:  
0.05% (all zones, w/o lens)

Geometric distortion:  
Below measurable level (w/o lens)

Modulation depth at 5 MHz:  
70% (16:9, typical)/55% (4:3, typical)

Viewfinder

CRT:  
2.0-inch type monochrome

Controls:  
BRIGHT, CONTRAST, PEAKING controls,  
TALLY, ZEBRA, DISPLAY switches

Horizontal resolution:  
450 TV lines (16:9)

Microphone:  
Ultra-directional (detachable)

Built-in LCD monitor

LCD:  
2.5-inch type color LCD monitor

Others

\*Eco Info

Halogenated flame retardants are not used  
in printed wiring boards.

## XDCAM Camcorders

# PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)

### Features

- MPEG IMX (50/40/30 Mb/s) and DVCAM switchable recording
- Superb picture and sound quality
- 12-bit A/D conversion
- High-performance digital signal processing
- 2/3-inch type 16:9/4:3 widescreen Power HAD EX CCD
- Long recording time; MPEG IMX at 30 Mb/s: 68 min., 40 Mb/s: 55 min., 50 Mb/s: 45 min., DVCAM: 85 min.
- Shock- and dust-resistant disc drive
- 2.5-inch(\*1) type color LCD screen
- Thumbnail Search operation
- Scene Selection operation
- Proxy AV (low-resolution audio and video) Data recording
- Metadata recording including Essence Mark, UMID, Extended UMID
- Picture cache recording function (up to ten seconds retroactively)
- Progressive mode: 25P
- Slow shutter function
- Turbo gain function (max. 48 dB)
- Auto Tracing White Balance (ATW) capability
- Multi-matrix function
- Interval recording function
- Analog composite output as standard
- SDI output and analog composite input as option
- Four assignable buttons
- Slot to accommodate a Sony WRR-855 Series wireless microphone receiver
- Optional Ethernet adaptor
- "Memory Stick" stores camera setup parameters
- Intelligent light system powered from the camcorder's battery
- Dual optical filter wheels for ND and CC
- i.LINK (DV stream) output from MPEG IMX playback
- Camera control from RM-B150/B750
- Compact and lightweight (approx. 5.8 kg including VF, BP-GL95 battery, disc and mic)
- Low power consumption of 36 W

(\*1) Measured diagonally



Lens, WRR-855A and battery are optional.

### Supplied Accessories

Operation manual (1)  
 PDZ-1 proxy browsing software (1)  
 MXF proxy viewer (1)  
 Viewfinder (1)  
 Lens cap (1)  
 Shoulder belt (1)  
 Monaural microphone (1)

### Optional Accessories

CBK-SC01 Analog Composite Input Board  
 CBK-SD01 SDI Output Board  
 CBK-NC01 Ethernet (100Base-TX) Adaptor  
 CA-701 Camcorder Adaptor  
 CA-702P Camcorder Adaptor  
 WLL-CA50 Wireless Camera Transmitter (CER)  
 WLL-RX55 Wireless Camera Receiver  
 RM-B150 Remote Control Unit  
 RM-B750 Remote Control Unit  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BC-M50 Ni-MH & Li-ion Battery Charger  
 BC-M150 Ni-MH & Li-ion Battery Charger  
 BC-L70 Li-ion Battery Charger  
 AC-550CE AC Adaptor  
 AC-DN2B AC Adaptor  
 AC-DN10 AC Adaptor/Charger

BVF-V10CE 1.5-inch Type B/W Viewfinder (CCIR)  
 VCT-14 Tripod Adaptor  
 BKW-401 Viewfinder Rotation Bracket  
 PFD23 Disc Professional Disc  
 MSH "Memory Stick" IC Memory Media  
 LC-777 Carrying Case  
 CCXA Cable Audio Cable  
 VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
 VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)  
 DSR-DU1 Video Disk Unit  
 CA-DU1 Camera Adaptor  
 DMX-P01 Portable Digital Mixer  
 WRR-855A UHF Synthesized Diversity Tuner (AU)  
 WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

# XDCAM Camcorders

## Specifications

### General

#### Mass:

Approx. 4.1 kg (9 lb)  
5.8 kg (12 lb 12 oz, with VF, Mic, Disc,  
BP-GL95 battery)

#### Power requirements:

DC 12 V +5.0 V/-1.0 V

#### Power consumption:

Approx. 36 W (while recording, with  
viewfinder, color LCD off)

#### Operating temperature:

-5 to 40 °C (+23 °F to +104 °F)

#### Storage temperature:

-20 to +60 °C (-4 °F to +140 °F)

#### Humidity:

10 to 90% (relative humidity)

#### Continuous operating time:

Approx. 120 min. w/BP-GL95 battery,  
approx. 90 min. w/BP-IL75 battery

#### Recording format

##### Video:

MPEG IMX (50/40/30 Mb/s), DVCAM (25  
Mb/s)

##### Proxy Video:

MPEG-4

##### Audio:

MPEG IMX: 4 ch/16 bits/48 kHz or 4  
ch/24 bits/48 kHz  
DVCAM: 4 ch/16 bits/48 kHz

##### Proxy Audio:

A-law (4ch, 8 bits, 8 kHz)

#### Recording/playback time

##### MPEG IMX:

50 Mb/s: 45 min., 40 Mb/s: 55 min., 30  
Mb/s: 68 min.

##### DVCAM:

85 min.

### Signal inputs

#### Genlock video:

BNC x1, 1.0 Vp-p, 75 Ω

#### Time code input:

BNC x1, 0.5 to 18 Vp-p, 10 kΩ

#### Audio input:

XLR-3-31 x2, line / mic / mic+48V / AES/EBU  
selectable

#### Mic input:

XLR-3-31 x1

### Signal outputs

#### Video output:

BNC x1, 1.0 Vp-p, 75 Ω

#### Video test output:

BNC x1, 1.0 Vp-p, 75 Ω

#### Time code output:

BNC x1, 1.0 Vp-p, 75 Ω

#### Earphone:

Mini-jack x2 (front: monaural, rear:  
stereo/monaural)

#### Audio output (CH-1/CH-2):

XLR 5-pin male (stereo)

### Other inputs/outputs

#### Lens:

12-pin

#### Remote:

8-pin

#### Light:

2-pin, DC 12 V, max. 50 W

#### DC input:

XLR 4-pin (for the optional AC-550CE)

#### DC output:

4-pin (for wireless microphone receiver), DC  
12 V (MAX 0.2A)

#### Camcorder adapter:

40-pin

#### i.LINK:

IEEE1394, DV IN/OUT or file access mode,  
6-pin x1

### Audio performance

#### Frequency response:

20 Hz to 20 kHz, +0.5 dB/-1.0 dB

#### Dynamic range:

More than 85 dB

#### Distortion:

Less than 0.08% (at 1 kHz, reference level)

#### Crosstalk:

Less than -70 dB (at 1 kHz, reference level)

#### Wow & flutter:

Below measurable limit

#### Head room:

20 dB (ex-factory setting)

### Camera section

#### Pickup device:

3-chip 2/3-inch type 16:9 widescreen Power  
HAD EX CCD

#### Total picture elements:

1038(H) x 1188(V)

#### Effective picture elements:

980(H) x 582(V)

#### Optical system:

F1.4 prism

#### Built-in optical filters:

1 : Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
A: CROSS, B: 3200K, C: 4300K, D: 6300K

#### Shutter speed:

1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)

#### Slow shutter:

1/2 to 1/25 (s) (1 to 8 and 16 frame  
accumulation)

#### Lens mount:

2/3" 48 bayonet mount

#### Sensitivity (2000 lx, 89.9% reflectance):

F11 (typical)

#### Minimum illumination:

Approx. 0.13 lx (F1.4 lens, +48 dB turbo  
gain, shutter off)

#### Gain selection:

-3 dB, -0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18  
dB, 24 dB, 30 dB, 36 dB, 42 dB, 48 dB

#### Smear level:

-140 dB (typical)

#### S/N ratio:

63 dB (typical)

#### Vertical resolution

480 TV Lines/530 TV Lines(EVS)

#### Registration:

0.05% (all zones, w/o lens)

#### Geometric distortion:

Below measurable level (w/o lens)

#### Modulation depth at 5 MHz:

70% (16:9, typical)/55% (4:3, typical)

### Viewfinder

#### CRT:

2.0-inch type monochrome

#### Controls:

BRIGHT, CONTRAST, PEAKING controls,  
TALLY, ZEBRA, DISPLAY switches

#### Horizontal resolution:

450 TV lines (16:9)

#### Microphone:

Ultra-directional (detachable)

### Built-in LCD monitor

#### LCD:

2.5-inch type color LCD monitor

### Others

#### \*Eco Info\*

Halogenated flame retardants are not used  
in printed wiring boards.

## XDCAM Camcorders

### PDW-510 XDCAM Camcorder (DVCAM Recording)

#### Features

●DVCAM recording ●Superb picture and sound quality  
 ●12-bit A/D conversion ●High-performance digital signal processing ●2/3-inch type 16:9/4:3 widescreen Power HAD EX CCD ●Long recording time of 85 min. ●Shock- and dust-resistant disc drive ●2.5-inch(\*1) type color LCD screen ●Thumbnail Search operation ●Scene Selection operation ●Proxy AV (low-resolution audio and video) Data recording ●Metadata recording including Essence Mark, UMID, Extended UMID ●Picture cache recording function (up to ten seconds retroactively) ●Progressive mode; NTSC: 29.97P or optional 23.976P(\*2) ●Slow shutter function ●Turbo gain function (max. 48 dB) ●Auto Tracing White Balance (ATW) capability ●Multi-matrix function ●Interval recording function ●Analog composite output as standard ●SDI output and analog composite input as option ●Four assignable buttons ●Slot to accommodate a Sony WRR-855 Series wireless microphone receiver ●Optional Ethernet adaptor ●"Memory Stick" stores camera setup parameters ●Intelligent light system powered from the camcorder's battery ●Built-in optical filter wheels ●Camera control from RM-B150/B750 ●Compact and lightweight (approx. 5.8 kg including VF, BP-GL95 battery, disc and mic) ●Low power consumption of 36 W

(\*1) Measured diagonally (\*2) Recording to disc is in 59.94i via 2-3 pull-down



Lens, WRR-855A and battery are optional.

XDCAM Camcorders

#### Supplied Accessories

Operation manual (1)  
 PDZ-1 proxy browsing software (1)  
 MXF proxy viewer (1)  
 Viewfinder (1)  
 Lens cap (1)  
 Shoulder belt (1)  
 Monaural microphone (1)

#### Optional Accessories

CBK-FC01 Pull-down (24P shooting) Board  
 CBK-SC01 Analog Composite Input Board  
 CBK-SD01 SDI Output Board  
 CBK-NC01 Ethernet (100Base-TX) Adaptor  
 CA-701 Camcorder Adaptor  
 CA-702 Camcorder Adaptor  
 WLL-CA50 Wireless Camera Transmitter (UC)  
 WLL-RX55 Wireless Camera Receiver  
 RM-B150 Remote Control Unit  
 RM-B750 Remote Control Unit  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BC-M50 Ni-MH & Li-ion Battery Charger  
 BC-M150 Ni-MH & Li-ion Battery Charger  
 BC-L70 Li-ion Battery Charger  
 AC-550 AC Adaptor  
 AC-DN2B AC Adaptor  
 AC-DN10 AC Adaptor/Charger  
 VCT-14 Tripod Adaptor  
 BVF-V10 1.5-inch Type B/W Viewfinder (EIA)  
 BKW-401 Viewfinder Rotation Bracket  
 PFD23 Disc Professional Disc  
 MSH "Memory Stick" IC Memory Media

LC-777 Carrying Case  
 CCXA Cable Audio Cable  
 VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
 VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)  
 DSR-DU1 Video Disk Unit  
 CA-DU1 Camera Adaptor  
 DMX-P01 Portable Digital Mixer  
 WRR-855A UHF Synthesized Diversity Tuner (64U)  
 WRR-855A UHF Synthesized Diversity Tuner (AU)  
 WRR-855A UHF Synthesized Diversity Tuner (68U)  
 WRR-855A UHF Synthesized Diversity Tuner (KR)  
 WRR-855B UHF Synthesized Diversity Tuner (1416U)  
 WRR-855B UHF Synthesized Diversity Tuner (3032U)  
 WRR-855B UHF Synthesized Diversity Tuner (6264U)  
 WRR-855B UHF Synthesized Diversity Tuner (6668U)  
 WRR-861B UHF Synthesized Diversity Tuner (U6264)  
 WRR-861B UHF Synthesized Diversity Tuner (U6668)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

# XDCAM Camcorders

## Specifications

### General

#### Mass:

- Approx. 4.1 kg (9 lb)
- 5.8 kg (12 lb 12 oz, with VF, Mic, Disc, BP-GL95 battery)

#### Power requirements:

- DC 12 V +5.0 V/-1.0 V

#### Power consumption:

- Approx. 36 W (while recording, with viewfinder, color LCD off)

#### Operating temperature:

- 5 to 40 °C (+23 °F to +104 °F)

#### Storage temperature:

- 20 to +60 °C (-4 °F to +140 °F)

#### Humidity:

- 10 to 90% (relative humidity)

#### Continuous operating time:

- Approx. 120 min. w/BP-GL95 battery, approx. 90 min. w/BP-IL75 battery

#### Recording format

##### Video:

- DVCAM (25 Mb/s)

##### Proxy Video:

- MPEG-4

##### Audio:

- 4 ch/16 bits/48 kHz

##### Proxy Audio:

- A-law (4ch, 8 bits, 8 kHz)

#### Recording/playback time

- 85 min.

### Signal inputs

#### Genlock video:

- BNC x1, 1.0 Vp-p, 75 Ω

#### Time code input:

- BNC x1, 0.5 to 18 Vp-p, 10 kΩ

#### Audio input:

- XLR-3-31 x2, line / mic / mic+48V / AES/EBU selectable

#### Mic input:

- XLR-3-31 x1

### Signal outputs

#### Video output:

- BNC x1, 1.0 Vp-p, 75 Ω

#### Video test output:

- BNC x1, 1.0 Vp-p, 75 Ω

#### Time code output:

- BNC x1, 1.0 Vp-p, 75 Ω

#### Earphone:

- Mini-jack x2 (front: monaural, rear: stereo/monaural)

#### Audio output (CH-1/CH-2):

- XLR 5-pin male (stereo)

### Other inputs/outputs

#### Lens:

- 12-pin

#### Remote:

- 8-pin

#### Light:

- 2-pin, DC 12 V, max. 50 W

#### DC input:

- XLR 4-pin (for the optional AC-550)

#### DC output:

- 4-pin (for wireless microphone receiver), DC 12 V (MAX 0.2A)

#### Camcorder adapter:

- 40-pin

#### i.LINK:

- IEEE1394, DV IN/OUT or file access mode, 6-pin x1

### Audio performance

#### Frequency response:

- 20 Hz to 20 kHz, +0.5 dB/-1.0 dB

#### Dynamic range:

- More than 85 dB

#### Distortion:

- Less than 0.08% (at 1 kHz, reference level)

#### Crosstalk:

- Less than -70 dB (at 1 kHz, reference level)

#### Wow & flutter:

- Below measurable limit

#### Head room:

- 20 dB (ex-factory setting)

### Camera section

#### Pickup device:

- 3-chip 2/3-inch type 16:9 widescreen Power HAD EX CCD

#### Total picture elements:

- 1038(H) x 1008(V)

#### Effective picture elements:

- 980 (H) x 494 (V)

#### Optical system:

- F1.4 prism

#### Built-in optical filters:

- 1 : 3200K, 2: 5600K+1/8ND, 3: 5600K, 4: 5600K+1/64ND

#### Shutter speed:

- 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)

#### Slow shutter:

- 1/2 to 1/30 (s) (1 to 8 and 16 frame accumulation)

#### Lens mount:

- 2/3" 48 bayonet mount

#### Sensitivity (2000 lx, 89.9% reflectance):

- F11 (typical)

#### Minimum illumination:

- Approx. 0.13 lx (F1.4 lens, +48 dB turbo gain, shutter off)

#### Gain selection:

- 3 dB, -0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB, 42 dB, 48 dB

#### Smear level:

- 140 dB (typical)

#### S/N ratio:

- 65 dB (typical)

#### Vertical resolution

- 400 TV Lines/450 TV Lines(EVS)

#### Registration:

- 0.05% (all zones, w/o lens)

#### Geometric distortion:

- Below measurable level (w/o lens)

#### Modulation depth at 5 MHz:

- 70% (16:9, typical)/55% (4:3, typical)

### Viewfinder

#### CRT:

- 2.0-inch type monochrome

#### Controls:

- BRIGHT, CONTRAST, PEAKING controls, TALLY, ZEBRA, DISPLAY switches

#### Horizontal resolution:

- 450 TV lines (16:9)

#### Microphone:

- Ultra-directional (detachable)

### Built-in LCD monitor

#### LCD:

- 2.5-inch type color LCD monitor

### Others

#### \*Eco Info\*

- Halogenated flame retardants are not used in printed wiring boards.

## XDCAM Camcorders

# PDW-510P XDCAM Camcorder (DVCAM Recording)

### Features

●DVCAM recording ●Superb picture and sound quality  
 ●12-bit A/D conversion ●High-performance digital signal processing ●2/3-inch type 16:9/4:3 widescreen Power HAD EX CCD ●Long recording time of 85 min. ●Shock- and dust-resistant disc drive ●2.5-inch(\*1) type color LCD screen ●Thumbnail Search operation ●Scene Selection operation ●Proxy AV (low-resolution audio and video) Data recording ●Metadata recording including Essence Mark, UMID, Extended UMID ●Picture cache recording function (up to ten seconds retroactively) ●Progressive mode: 25P ●Slow shutter function ●Turbo gain function (max. 48 dB) ●Auto Tracing White Balance (ATW) capability ●Multi-matrix function ●Interval recording function ●Analog composite output as standard ●SDI output and analog composite input as option ●Four assignable buttons ●Slot to accommodate a Sony WRR-855 Series wireless microphone receiver ●Optional Ethernet adaptor ●"Memory Stick" stores camera setup parameters ●Intelligent light system powered from the camcorder's battery ●Built-in optical filter wheels ●Camera control from RM-B150/B750 ●Compact and lightweight (approx. 5.8 kg including VF, BP-GL95 battery, disc and mic) ●Low power consumption of 36 W

(\*1) Measured diagonally



Lens, WRR-855A and battery are optional.

### Supplied Accessories

Operation manual (1)  
 PDZ-1 proxy browsing software (1)  
 MXF proxy viewer (1)  
 Viewfinder (1)  
 Lens cap (1)  
 Shoulder belt (1)  
 Monaural microphone (1)

### Optional Accessories

CBK-SC01 Analog Composite Input Board  
 CBK-SD01 SDI Output Board  
 CBK-NC01 Ethernet (100Base-TX) Adaptor  
 CA-701 Camcorder Adaptor  
 CA-702P Camcorder Adaptor  
 WLL-CA50 Wireless Camera Transmitter (CER)  
 WLL-RX55 Wireless Camera Receiver  
 RM-B150 Remote Control Unit  
 RM-B750 Remote Control Unit  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BC-M50 Ni-MH & Li-ion Battery Charger  
 BC-M150 Ni-MH & Li-ion Battery Charger  
 BC-L70 Li-ion Battery Charger  
 AC-550CE AC Adaptor  
 AC-DN2B AC Adaptor  
 AC-DN10 AC Adaptor/Charger  
 BVF-V10CE 1.5-inch Type B/W Viewfinder (CCIR)  
 BKW-401 Viewfinder Rotation Bracket

### VCT-14 Tripod Adaptor

PFD23 Disc Professional Disc  
 MSH "Memory Stick" IC Memory Media  
 LC-777 Carrying Case  
 CCXA Cable Audio Cable  
 VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
 VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)  
 DSR-DU1 Video Disk Unit  
 CA-DU1 Camera Adaptor  
 DMX-P01 Portable Digital Mixer  
 WRR-855A UHF Synthesized Diversity Tuner (AU)  
 WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

# XDCAM Camcorders

## Specifications

### General

#### Mass:

- Approx. 4.1 kg (9 lb)
- 5.8 kg (12 lb 12 oz, with VF, Mic, Disc, BP-GL95 battery)

#### Power requirements:

- DC 12 V +5.0 V/-1.0 V

#### Power consumption:

- Approx. 36 W (while recording, with viewfinder, color LCD off)

#### Operating temperature:

- 5 to 40 °C (+23 °F to +104 °F)

#### Storage temperature:

- 20 to +60 °C (-4 °F to +140 °F)

#### Humidity:

- 10 to 90% (relative humidity)

#### Continuous operating time:

- Approx. 120 min. w/BP-GL95 battery, approx. 90 min. w/BP-IL75 battery

#### Recording format

##### Video:

- DVCAM (25 Mb/s)

##### Proxy Video:

- MPEG-4

##### Audio:

- 4 ch/16 bits/48 kHz

##### Proxy Audio:

- A-law (4ch, 8 bits, 8 kHz)

#### Recording/playback time

- 85 min.

### Signal inputs

#### Genlock video:

- BNC x1, 1.0 Vp-p, 75 Ω

#### Time code input:

- BNC x1, 0.5 to 18 Vp-p, 10 kΩ

#### Audio input:

- XLR-3-31 x2, line / mic / mic+48V / AES/EBU selectable

#### Mic input:

- XLR-3-31 x1

### Signal outputs

#### Video output:

- BNC x1, 1.0 Vp-p, 75 Ω

#### Video test output:

- BNC x1, 1.0 Vp-p, 75 Ω

#### Time code output:

- BNC x1, 1.0 Vp-p, 75 Ω

#### Earphone:

- Mini-jack x2 (front: monaural, rear: stereo/monaural)

#### Audio output (CH-1/CH-2):

- XLR 5-pin male (stereo)

### Other inputs/outputs

#### Lens:

- 12-pin

#### Remote:

- 8-pin

#### Light:

- 2-pin, DC 12 V, max. 50 W

#### DC input:

- XLR 4-pin (for the optional AC-550CE)

#### DC output:

- 4-pin (for wireless microphone receiver), DC 12 V (MAX 0.2A)

#### Camcorder adapter:

- 40-pin

#### i.LINK:

- IEEE1394, DV IN/OUT or file access mode, 6-pin x1

### Audio performance

#### Frequency response:

- 20 Hz to 20 kHz, +0.5 dB/-1.0 dB

#### Dynamic range:

- More than 85 dB

#### Distortion:

- Less than 0.08% (at 1 kHz, reference level)

#### Crosstalk:

- Less than -70 dB (at 1 kHz, reference level)

#### Wow & flutter:

- Below measurable limit

#### Head room:

- 20 dB (ex-factory setting)

### Camera section

#### Pickup device:

- 3-chip 2/3-inch type 16:9 widescreen Power HAD EX CCD

#### Total picture elements:

- 1038(H) x 1188(V)

#### Effective picture elements:

- 980(H) x 582(V)

#### Optical system:

- F1.4 prism

#### Built-in optical filters:

- 1 : 3200K, 2: 5600K+1/8ND, 3: 5600K, 4: 5600K+1/64ND

#### Shutter speed:

- 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)

#### Slow shutter:

- 1/2 to 1/25 (s) (1 to 8 and 16 frame accumulation)

#### Lens mount:

- 2/3" 48 bayonet mount

#### Sensitivity (2000 lx, 89.9% reflectance):

- F11 (typical)

#### Minimum illumination:

- Approx. 0.13 lx (F1.4 lens, +48 dB turbo gain, shutter off)

#### Gain selection:

- 3 dB, -0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 24 dB, 30 dB, 36 dB, 42 dB, 48 dB

#### Smear level:

- 140 dB (typical)

#### S/N ratio:

- 63 dB (typical)

#### Vertical resolution

- 480 TV Lines/530 TV Lines(EVS)

#### Registration:

- 0.05% (all zones, w/o lens)

#### Geometric distortion:

- Below measurable level (w/o lens)

#### Modulation depth at 5 MHz:

- 70% (16:9, typical)/55% (4:3, typical)

### Viewfinder

#### CRT:

- 2.0-inch type monochrome

#### Controls:

- BRIGHT, CONTRAST, PEAKING controls, TALLY, ZEBRA, DISPLAY switches

#### Horizontal resolution:

- 450 TV lines (16:9)

#### Microphone:

- Ultra-directional (detachable)

### Built-in LCD monitor

#### LCD:

- 2.5-inch type color LCD monitor

### Others

#### "Eco Info"

- Halogenated flame retardants are not used in printed wiring boards.

XDCAM Camcorders



XDCAM Camcorders

# Digital Betacam Camcorders

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## Digital Betacam Camcorders

### DVW-970 Digital Betacam Camcorder

The DVW-970 Digital Betacam Camcorder is a worthy successor and the leading solution for broadcasters who want top-quality SD productions. Inheriting the market-proven features of previous models, the DVW-970 combines the latest camera technology, with enhanced reliability, mobility, and operability.

#### Features

- Superb picture quality of the Digital Betacam format
- Power HAD EX CCD ●14-bit A/D conversion and Advanced Digital Signal Processing (ADSP) ●High-quality digital audio: four-channels, 20-bit/48 kHz ●Long recording time of 40 minutes on an S cassette ●Compact and lightweight: 5.4 kg (11 lb 14 oz) including the VF, microphone, tape, and BP-GL95 battery ●Low power consumption of approximately 29 W ●Stereo audio output
- Camera remote control using RM-B150/B750 ●Dual optical filters plus electric color correction
- Battery-remaining display on viewfinder ●Assignable functions ●Intelligent light system ●Turbo gain: max. +48 dB ●Adjustable shoulder pad ●Slot for WRR-855 series wireless microphone receiver ●Memory Stick system stores camera setup parameters ●Film-like images with progressive mode ●Slow shutter mode: max. 16 frames
- Picture cache and interval recording (the optional CBK-MB01 required) ●Selectable gamma table including film-like gamma ●TruEye processor ●Adaptive highlight control ●Triple skin tone detail control ●Variable black gamma range ●Auto-Tracing White balance (ATW)
- Multi-Matrix function ●Electronic soft focus ●Color temperature control ●Essence Mark and UMID handling



Lens and battery are optional.

#### Supplied Accessories

Operation manual (1)  
Viewfinder (1)  
Lens cap (1)  
Shoulder belt (1)  
monaural microphone (1)

#### Optional Accessories

CBK-SD01 SDI Output Board  
CBK-MB01 Picture Cache Board  
CBK-FC01 Pull-down (24P shooting) Board  
BKW-401 Viewfinder Rotation Bracket  
RM-B150 Remote Control Unit  
RM-B750 Remote Control Unit  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
VCT-14 Tripod Adaptor  
BCT-D tapes BCT-D Series Digital BETACAM Tapes  
MSH "Memory Stick" IC Memory Media

ECM-678 Electret Condenser Microphone  
ECM-670 Electret Condenser Microphone (E)  
ECM-670 Electret Condenser Microphone (U)  
ECM-672 Electret Condenser Microphone (E)  
ECM-672 Electret Condenser Microphone (U)  
ECM-674 Electret Condenser Microphone  
WLL-CA50 Wireless Camera Transmitter (UC)  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
WRR-855B UHF Synthesized Diversity Tuner (1416U)  
WRR-855B UHF Synthesized Diversity Tuner (3032U)  
WRR-855B UHF Synthesized Diversity Tuner (6264U)  
WRR-855B UHF Synthesized Diversity Tuner (6668U)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

# Digital Betacam Camcorders

## Specifications

### General

Power requirements  
DC 12 V +5.0 V/-1.0 V

Power consumption  
29 W (with DC 12 V power supply, REC mode, with viewfinder)

Operating temperature  
0 to +40 °C (+32 to +104 °F)

Storage temperature  
-20 to +60 °C (-4 to +140 °F)

Operating humidity  
25 to 85% (relative humidity)

Mass  
Approx. 3.7 kg (8 lb 3 oz)  
Approx. 5.4 kg (11 lb 14 oz) (with viewfinder, microphone, BP-GL95 battery, BCT-D40 tape)

Continuous operating time  
Approx. 170 min. with BP-GL95 battery at 25 °C (77 °F), REC mode

### Signal inputs/outputs

Genlock video input  
BNC type (1), 1.0 Vp-p, 75 Ω

Audio input (CH-1/2)  
XLR-3-31 type (2), -60/-50/-40/+4 dBu (\*1) selectable, high impedance, balanced

Microphone input  
XLR-3-31 type (1), -60/-50/-40 dBu\*

Time code input  
BNC type (1), 0.5 to 18 Vp-p, 10 kΩ

Analog composite output  
BNC type (1), 1.0 Vp-p, 75 Ω

SDI output  
BNC type (1), 0.8 Vp-p, 75 Ω (the optional CBK-SD01 is required)

Video test output  
BNC type (1), 1.0 Vp-p, 75 Ω

Audio output (CH-1/2)  
XLR-5-pin, male (stereo)

Time code output  
BNC type (1), 1.0 Vp-p, 75 Ω

Earphone output  
Mini-jack (2)

### Other inputs/outputs

Lens  
12-pin

VF  
20-pin

Remote  
8-pin

Wireless microphone  
D-Sub 15-pin

Light  
2-pin, DC 12 V, max. 50 W

DC input  
XLR-4-pin, male, DC 11 to 17 V

DC output  
4-pin (for wireless microphone receiver), DC 12 V (max. 0.1 A)

Battery terminal  
5-pin

Camcorder adaptor  
40-pin

### Camera section

Pickup device  
Pickup device  
3-chip 2/3-inch type Power HAD EX CCD

Aspect ratio  
16:9/4:3 switchable

Total picture elements (H x V)  
1038 x 1008

Effective picture elements (H x V)  
980 x 988

Optical system  
Spectral system  
F1.4 prism (with quartz filter)

Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND, A: CROSS, B: 3200K, C: 4300K, D: 6300K

Lens mount  
2/3-inch type Sony bayonet mount

Electrical characteristics  
Scan format  
525/59.94i, 525/29.97p, 525/23.976p

A/D conversion  
14 bits

Sensitivity  
F11 (typical) (2000 lx, 89.9% reflectance)

Minimum illumination  
0.008 lx (F1.4 lens, +48 dB gain, with slow shutter mode at 16-frame accumulation)

Smear level  
-145 dB (typical)

Video S/N ratio  
65 dB (typical)

Vertical resolution  
450 TV lines (with EVS) and 400 TV lines (without EVS) at 525/59.94i mode  
485 TV lines at 525/29.97p and 525/23.976p modes

Shutter speed  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 525/59.94i mode  
1/40, 1/60, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 525/29.97p mode  
1/32, 1/48, 1/96, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 525/23.976p mode

ECS  
60 to 6000 Hz at 525/59.94i mode  
30 to 7000 Hz at 525/29.97p mode  
24 to 5000 Hz at 525/23.976p mode

Slow shutter  
1/30, 1/15, 1/10, 1/7.5, 1/6, 1/4.3, 1/3.8, 1/1.9 s (1 to 8, 16 frames)

Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB (for GAIN LOW, GAIN MID, GAIN HIGH and GAIN TURBO positions)

Registration  
0.05% (all zones, without lens)

Warm-up time  
2 s

Modulation depth at 5 MHz  
70% (16:9 typical)/55% (4:3 typical)

### VTR section

Recording format  
Video  
Digital Betacam

Audio  
4 ch/20 bits/48 kHz

Tape speed  
96.7 mm/s

Record/playback time  
Max. 40 min (with the BCT-D40 cassette)

Fast forward time  
Approx. 5 min (with the BCT-D40 cassette)

Rewind time  
Approx. 5 min (with the BCT-D40 cassette)

Recommended recording media  
Sony Digital Betacam S cassette:  
BCT-D6/D12/D22/D32/D40

Sampling frequency  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization  
10 bits/sample

**Digital video performance**  
K-factor (2T pulse)  
Less than 1%

Y/C delay  
Less than 15 ns

**Digital audio performance (\*2)**  
Frequency response  
20 Hz to 20 kHz, +0.5/-0.8 dB

Dynamic range  
More than 85 dB (emphasis on)

Distortion (at 1 kHz, emphasis ON, reference level)  
Less than 0.08%

Cross talk (at 1 kHz, reference level)  
Less than -70 dB

Wow & flutter  
Below measurable limit

Headroom  
20 dB (ex-factory setting)

**Viewfinder**  
CRT  
2.0-inch type monochrome

Controls  
BRIGHT, CONTRAST, PEAKING controls, TALLY, ZEBRA, DISPLAY switches

Horizontal resolution  
450 TV lines (16:9)/600 TV lines (4:3)

Microphone  
Electret condenser microphone (Ultra-directional) (detachable)

(\*1) 0 dBu=0.775 Vrms. (\*2) The specifications given above were measured via CBK-SD01 SDI Output Board.

## Digital Betacam Camcorders

### DVW-970P Digital Betacam Camcorder

The DVW-970P Digital Betacam Camcorder is a worthy successor and the leading solution for broadcasters who want top-quality SD productions. Inheriting the market-proven features of previous models, the DVW-970P combines the latest camera technology, with enhanced reliability, mobility, and operability.

#### Features

- Superb picture quality of the Digital Betacam format
- Power HAD EX CCD ●14-bit A/D conversion and Advanced Digital Signal Processing (ADSP) ●High-quality digital audio: four-channels, 20-bit/48 kHz ●Long recording time of 40 minutes on an S cassette ●Compact and lightweight: 5.4 kg (11 lb 14 oz) including the VF, microphone, tape, and BP-GL95 battery ●Low power consumption of approximately 29 W ●Stereo audio output
- Camera remote control using RM-B150/B750 ●Dual optical filters plus electric color correction
- Battery-remaining display on viewfinder ●Assignable functions ●Intelligent light system ●Turbo gain: max. +48 dB ●Adjustable shoulder pad ●Slot for WRR-855 series wireless microphone receiver ●Memory Stick system stores camera setup parameters ●Film-like images with progressive mode ●Slow shutter mode: max. 16 frames
- Picture cache and interval recording (the optional CBK-MB01 required) ●Selectable gamma table including film-like gamma ●TruEye processor ●Adaptive highlight control ●Triple skin tone detail control ●Variable black gamma range ●Auto-Tracing White balance (ATW)
- Multi-Matrix function ●Electronic soft focus ●Color temperature control ●Essence Mark and UMID handling



Lens and battery are optional.

#### Supplied Accessories

Operation manual (1)  
Viewfinder (1)  
Lens cap (1)  
Shoulder belt (1)  
monaural microphone (1)

#### Optional Accessories

CBK-SD01 SDI Output Board  
CBK-MB01 Picture Cache Board  
BKW-401 Viewfinder Rotation Bracket  
RM-B150 Remote Control Unit  
RM-B750 Remote Control Unit  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
VCT-14 Tripod Adaptor  
BCT-D tapes BCT-D Series Digital BETACAM Tapes

MSH "Memory Stick" IC Memory Media  
ECM-678 Electret Condenser Microphone  
ECM-674 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone (E)  
ECM-670 Electret Condenser Microphone  
ECM-670 Electret Condenser Microphone (E)  
WLL-CA50 Wireless Camera Transmitter (CER)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

# Digital Betacam Camcorders

## Specifications

### General

Power requirements  
DC 12 V +5.0 V/-1.0 V

Power consumption  
29 W (with DC 12 V power supply, REC mode, with viewfinder)

Operating temperature  
0 to +40 °C (+32 to +104 °F)

Storage temperature  
-20 to +60 °C (-4 to +140 °F)

Operating humidity  
25 to 85% (relative humidity)

Mass  
Approx. 3.7 kg (8 lb 3 oz)  
Approx. 5.4 kg (11 lb 14 oz) (with viewfinder, microphone, BP-GL95 battery, BCT-D40 tape)

Continuous operating time  
Approx. 170 min. with BP-GL95 battery at 25 °C (77 °F), REC mode

### Signal inputs/outputs

Genlock video input  
BNC type (1), 1.0 Vp-p, 75 Ω

Audio input (CH-1/2)  
XLR-3-31 type (2), -60/-50/-40/+4 dBu (\*1) selectable, high impedance, balanced

Microphone input  
XLR-3-31 type (1), -60/-50/-40 dBu (\*1)

Time code input  
BNC type (1), 0.5 to 18 Vp-p, 10 kΩ

Analog composite output  
BNC type (1), 1.0 Vp-p, 75 Ω

SDI output  
BNC type (1), 0.8 Vp-p, 75 Ω (the optional CBK-SD01 is required)

Video test output  
BNC type (1), 1.0 Vp-p, 75 Ω

Audio output (CH-1/2)  
XLR-5-pin, male (stereo)

Time code output  
BNC type (1), 1.0 Vp-p, 75 Ω

Earphone output  
Mini-jack (2)

### Other inputs/outputs

Lens  
12-pin

VF  
20-pin

Remote  
8-pin

Wireless microphone  
D-Sub 15-pin

Light  
2-pin, DC 12 V, max. 50 W

DC input  
XLR-4-pin, male, DC 11 to 17 V

DC output  
4-pin (for wireless microphone receiver), DC 12 V (max. 0.1 A)

Battery terminal  
5-pin

Camcorder adaptor  
40-pin

### Camera section

Pickup device  
3-chip 2/3-inch type Power HAD EX CCD

Aspect ratio  
16:9/4:3 switchable

Total picture elements (H x V)  
1038 x 1188

Effective picture elements (H x V)  
980 x 1164

Optical system  
Spectral system  
F1.4 prism (with quartz filter)

Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND, A: CROSS, B: 3200K, C: 4300K, D: 6300K

Lens mount  
2/3-inch type Sony bayonet mount

Electrical characteristics  
Scan format  
625/50i, 625/25p

A/D conversion  
14 bits

Sensitivity  
F11 (typical) (2000 lx, 89.9% reflectance)

Minimum illumination  
0.008 lx (F1.4 lens, +48 dB gain, with slow shutter mode at 16-frame accumulation)

Smear level  
-145 dB (typical)

Video S/N ratio  
63 dB (typical)

Vertical resolution  
480 TV lines (with EVS) and 530 TV lines (without EVS) at 625/50i mode  
575 TV lines at 625/25p mode

Shutter speed  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 625/50i mode  
1/33, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 625/25p mode

ECS  
50 to 6000 Hz at 625/50i mode  
25 to 6000 Hz at 625/25p mode

Slow shutter  
1/25, 1/12.5, 1/8.3, 1/6.3, 1/5, 1/4.2, 1/3.6, 1/3.1, 1/1.6 s (1 to 8, 16 frames)

Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB (for GAIN LOW, GAIN MID, GAIN HIGH and GAIN TURBO positions)

Registration  
0.05% (all zones, without lens)

Warm-up time  
2 s

Modulation depth at 5 MHz  
70% (16:9 typical)/55% (4:3 typical)

### VTR section

Recording format  
Video  
Digital Betacam

Audio  
4 ch/20 bits/48 kHz

Tape speed  
96.7 mm/s

Record/playback time  
Max. 40 min (with the BCT-D40 cassette)

Fast forward time  
Approx. 5 min (with the BCT-D40 cassette)

Rewind time  
Approx. 5 min (with the BCT-D40 cassette)

Recommended recording media  
Sony Digital Betacam S cassette:  
BCT-D6/D12/D22/D32/D40

Sampling frequency  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization  
10 bits/sample

Digital video performance  
K-factor (2T pulse)  
Less than 1%

Y/C delay  
Less than 15 ns

Digital audio performance (\*2)  
Frequency response  
20 Hz to 20 kHz, +0.5/-0.8 dB

Dynamic range  
More than 85 dB (emphasis on)

Distortion (at 1 kHz, emphasis ON,reference level)  
Less than 0.08%

Cross talk  
(at 1 kHz, reference level)  
Less than -70 dB

Wow & flutter  
Below measurable limit

Headroom  
20 dB (ex-factory setting)

Viewfinder  
CRT  
2.0-inch type monochrome

Controls  
BRIGHT, CONTRAST, PEAKING controls, TALLY, ZEBRA, DISPLAY switches

Horizontal resolution  
450 TV lines (16:9)/600 TV lines (4:3)

Microphone  
Electret condenser microphone (Ultra-directional) (detachable)

(\*1) 0 dBu=0.775 Vrms. (\*2) The specifications given above were measured via CBK-SD01 SDI Output Board.

## Digital Betacam Camcorders

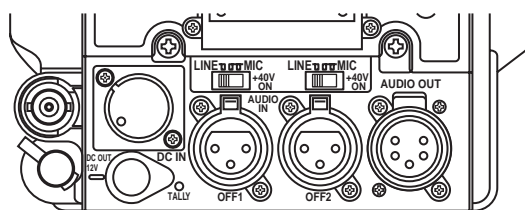
### DVW-707P Digital Betacam Camcorder

#### Features

•Superb picture and sound quality of Digital Betacam format •12-bit A/D converter •High performance ADSP (Advanced Digital Signal Processing) camcorder  
 •Combines digital signal processing camera circuitry with 2/3-inch type Power HAD IT CCDs (each with 470,000 picture elements) •40 minutes of recording time on S-cassette •Multi Matrix Function for color correction  
 •Turbo Gain function •Auto Tracing White Balance (ATW) capability •TruEye Process for faithful color reproduction  
 •Selectable gamma curve for more natural tonal reproduction •Color temperature control allows the color balance of a picture to be changed to make it warmer or colder. •Assignable button for ATW, RET, REC, Turbo Gain and other functions •Setup Card system to store setup parameters made via the camera head menu system  
 •Internal light system powered from the camcorder's lithium-ion battery •Variable speed electronic shutter •Clear Scan function for shooting computer displays •Enhanced Vertical Definition System (EVS) for vertical resolution of 530 TV lines •Shot Data Recording of date and time of shooting, shot ID, cassette number and so on •Playback capability of full color video and audio without an adapter •Basic camera control from RM-B150 remote control unit •Compact and lightweight, approx. 7 kg including viewfinder, battery, cassette, microphone and lens •Low power consumption of 29 W



Lens and battery are optional.



#### Supplied Accessories

Microphone (1)  
 Shoulder belt (1)  
 Lens cap (1)  
 XLR cap (4)  
 Maintenance manual (1)  
 Operation manual (1)  
 BVF-V10CE 1.5-inch Type B/W Viewfinder (CCIR) (1)

#### Optional Accessories

RM-B750 Remote Control Unit  
 RM-B150 Remote Control Unit  
 WLL-CA50 Wireless Camera Transmitter (CER)  
 BKDW-701 Servo Filter Unit  
 CA-701 Camcorder Adaptor  
 CA-702 Camcorder Adaptor  
 CA-755 Camcorder Adaptor  
 CA-755P Camcorder Adaptor  
 AC-DN1 AC Adaptor  
 AC-DN2A AC Adaptor  
 AC-DN2B AC Adaptor  
 AC-DN10 AC Adaptor/Charger  
 BP-L60A Rechargeable Lithium-ion Battery Pack  
 BP-L90A Rechargeable Lithium-ion Battery Pack  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BC-L120 Lithium-ion Battery Charger  
 BC-M50 Ni-MH & Li-ion Battery Charger  
 BC-L70 Li-ion Battery Charger  
 BC-M150 Ni-MH & Li-ion Battery Charger

BSC-1-PACK Setup Card  
 BVF-VC10W 1.35-inch Type Color Viewfinder  
 CCXA Cable Audio Cable  
 LC-777 Carrying Case  
 WRR-855A UHF Synthesized Diversity Tuner (AU)  
 WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
 WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
 WRR-861A UHF Synthesized Diversity Tuner (AU)  
 WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
 WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

#### Optional Boards

BKDW-702 SDI Output Board  
 BKDW-703 Picture Cache Board

For mounting WRR-855A/855B, an adaptor is required.

Digital Betacam Camcorders

Specifications

General

Mass

Approx. 5.0 kg (11 lb. 1 oz)

Operating mass

Approx. 7.0 kg (15 lb. 7 oz)

Power requirements

DC 12 V +5.0/-1.0 V

Power consumption

29 W

Operating temperature

0 °C to +40 °C (+32 °F to +104 °F)

Storage temperature

-20 °C to +60 °C ( -4 °F to +140 °F)

Humidity

25 to 85 % (relative humidity)

Continuous operating time

Approx. 135 min (with BP-L60A)

Approx. 205 min (with BP-L90A)

Signal Inputs

Genlock video input

BNC(1), 1.0 Vp-p, 75 Ω

Time code input

BNC(1), 0.5 to 18 Vp-p, 10 kΩ

Audio input (CH-1/2)

XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced

Mic input

XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced

Signal Outputs

Video output

BNC(1), 1.0 Vp-p, 75 Ω

Video test output

BNC(1), 1.0 Vp-p, 75 Ω

Time code output

BNC(1), 1.0 Vp-p, 75 Ω

Earphone

Mini jack

Audio output (CH-1/2)

XLR-5-pin male(stereo)

Others

Lens

12-pin

Remote

8-pin

Light

2-pin, DC 12 V, max. 50 W

DC input

XLR 4-pin (for the optional AC-550CE)

DC output

4-pin (for wireless microphone receiver),  
DC 12V

Camcorder adapter

40-pin

VTR Section

General

Recording format

Digital BETACAM

Tape speed

96.7mm/s

Playback/Recording time

Max. 40 min. (with BCT-D40 cassette)

Fast forward time

Less than 6 min. (with BCT-D40  
cassette)

Rewind time

Less than 5 min. (with BCT-D40  
cassette)

Recommended tape

Sony Digital Betacam S cassette,  
BCT-D6/D12/D22/D32/D40 Series

Sampling Frequency

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization

10 bit/sample

Error correction

Reed-Solomon code

Error concealment

Adaptive three dimensional

Digital video performance

Bandwidth

Y: 5.75 MHz ±0.5 dB, R-Y/B-Y: 2.75  
MHz ±0.5 dB

S/N ratio

More than 62 dB

K-factor(2T pulse)

Less than 1%

Linearity

Less than 2%

Y/R-Y/B-Y delay

Less than 15 ns

Digital audio performance

Sampling frequency

48 kHz (synchronized with video)

Quantization

20 bits/sample

A/D and D/A quantization

16 bits/sample

Frequency response

20 Hz to 20 kHz +0.5 dB/-0.8 dB

Dynamic range

More than 85 dB(emphasis ON)

Distortion (at 1 kHz, emphasis ON,  
reference level)

Less than 0.08%

Crosstalk (at 1 kHz, reference level)

Less than -70 dB

Wow and flutter

Below measurable limit

Head room

20 dB (ex-factory setting)

Emphasis (ON/OFF selectable)

T1=50 μs, T2=15 μs

Analog audio performance (Cue track)

Frequency response

100 Hz to 12 kHz ±3 dB

S/N ratio

More than 50 dB at 3% distortion level

Distortion

Less than 1.5%(T.H.D at 1 kHz  
reference level)

Wow and flutter

Less than 0.2%

Camera Section

Pickup device

3-chip 2/3-inch Power HAD IT CCD

Picture elements

795(H) x 596(V)

Optical system

F1.4 prism system

Built-in filters

1: CLEAR 2: 5600 K + 1/8 ND 3: 5600 K  
4: 5600K + 1/64 ND

Shutter speed

1/60, 1/125, 1/250, 1/500, 1/1000,  
1/2000(s)

Lens mount

Special bayonet mount

Sensitivity (2000 lx with F8.0, 89.9 %  
reflective)

F10.0(Typical) Equivalent to ISO 600 or  
more

Minimum illumination

Approx. 0.15 lx(F1.4 lens, +48 dB Turbo  
Gain)

Smear level

-125 dB

S/N ratio

63 dB (typical)

Vertical resolution

Without EVS

480 TV lines

With EVS

530 TV lines

Registration

0.05% (All zones, without lens)

Geometric distortion

Below measurable level (Without lens)

Warm-up time

2 s

Modulation depth at 5 MHz

More than 55%

Viewfinder

CRT

1.5-inch type monochrome

Controls

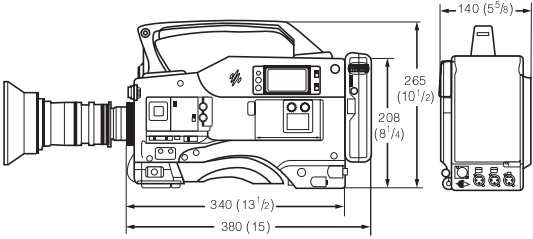
BRIGHT control, CONTRAST control,  
PEAKING control, TALLY, ZEBRA, DISPLAY  
switches

Horizontal resolution

600 TV lines

Microphone

Ultra-directional (detachable)



Unit: mm (inch)

## Digital Betacam Camcorders

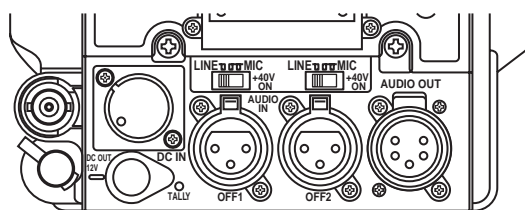
### DVW-709WS Digital Betacam 16:9/4:3 Switchable Camcorder

#### Features

- Superb picture and sound quality of Digital Betacam format
- 12-bit A/D converter
- High performance ADSP (Advanced Digital Signal Processing) camcorder
- Combines digital signal processing camera circuitry with 2/3-inch type 16:9/4:3 widescreen Power HAD 1000 IT CCD (each with 520,000 picture elements)
- 40 minutes of recording time on S-cassette
- Multi Matrix function for color correction
- Turbo Gain function
- Auto Tracing White Balance (ATW) capability
- TruEye Process for faithful color reproduction
- Selectable gamma curve for more natural tonal reproduction
- Color temperature control allows the color balance of a picture to be changed to make it warmer or colder
- Assignable button for ATW, RET, REC, Turbo Gain and other functions
- Setup Card system to store setup parameters made via the camera head menu system
- Internal light system powered from the camcorder's lithium-ion battery
- Optical filter wheels for ND (Neutral Density) and CC (Color Conversion)
- Variable speed electronic shutter
- Clear Scan function for shooting computer displays
- Enhanced Vertical Definition System (EVS) for vertical resolution of 450 TV lines
- Shot Data Recording of date and time of shooting, shot ID, cassette number and so on
- Playback capability of full color video and audio without an adapter
- Basic camera control from RM-B150 remote control unit
- Compact and lightweight, approx. 7 kg including viewfinder, battery, cassette, microphone and lens
- Low power consumption of 31.5 W



Lens and battery are optional.



#### Supplied Accessories

Microphone (1)  
Shoulder belt (1)  
Lens cap (1)  
XLR cap (4)  
Maintenance manual (1)  
Operation manual (1)  
BVF-V10 1.5-inch Type BW Viewfinder (EIA) (1)

#### Optional Accessories

RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
WLL-CA50 Wireless Camera Transmitter (UC)  
BKDW-701 Servo Filter Unit  
CA-701 Camcorder Adaptor  
CA-702 Camcorder Adaptor  
CA-755 Camcorder Adaptor  
AC-DN1 AC Adaptor  
AC-DN2A AC Adaptor  
AC-DN2B AC Adaptor  
AC-DN10 AC Adaptor/Charger  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BC-L120 Lithium-ion Battery Charger  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger

#### BSC-1-PACK Setup Card

BVF-VC10W 1.35-inch Type Color Viewfinder  
CCXA Cable Audio Cable  
LC-777 Carrying Case  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
WRR-855B UHF Synthesized Diversity Tuner (1416U)  
WRR-855B UHF Synthesized Diversity Tuner (3032U)  
WRR-855B UHF Synthesized Diversity Tuner (6264U)  
WRR-855B UHF Synthesized Diversity Tuner (6668U)  
WRR-861A UHF Synthesized Diversity Tuner (AU)  
WRR-861B UHF Synthesized Diversity Tuner (U6264)  
WRR-861B UHF Synthesized Diversity Tuner (U6668)  
WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

#### Optional Boards

BKDW-702 SDI Output Board  
BKDW-703 Picture Cache Board

For mounting WRR-855A/855B, an adaptor is required.

Digital Betacam Camcorders

Specifications

General

Mass:  
Approx. 5.0 kg (11 lb 1 oz)  
Operating mass:  
Approx. 7.0 kg (15 lb 7 oz)  
Power requirements:  
DC 12 V +5.0/-1.0 V  
Power consumption:  
31.5 W  
Operating temperature:  
0 to +40 °C (+32 to +104 °F)  
Storage temperature:  
-20 to +60 °C (-4 to +140 °F)  
Humidity:  
25 to 85% (relative humidity)  
Continuous operating time:  
Approx. 125 min (with BP-L60A)  
Approx. 190 min (with BP-L90A)

Signal inputs

Genlock video input:  
BNC(1), 1.0 Vp-p, 75 Ω  
Time code input:  
BNC(1), 0.5 to 18 Vp-p, 10 kΩ  
Audio input (CH-1/2):  
XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced  
Microphone input:  
XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced

Signal outputs

Video output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Video test output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Time code output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Earphone:  
Mini jack  
Audio output (CH-1/2):  
XLR 5-pin male(stereo)

Others

Lens:  
12-pin  
Remote:  
8-pin  
Light:  
2-pin, DC 12 V, max. 50 W  
DC input:  
XLR 4-pin (for the optional AC-550)  
DC output:  
4-pin (for wireless microphone receiver),  
DC 12 V  
Camcorder adapter:  
40-pin

VTR section

General  
Recording format:  
Digital BETACAM  
Tape speed:  
96.7 mm/s  
Playback/Recording time:  
Max. 40 min (with BCT-D40 cassette)  
Fast forward time:  
Less than 6 min (with BCT-D40 cassette)  
Rewind time:  
Less than 5 min (with BCT-D40 cassette)  
Recommended tape:  
Sony Digital Betacam S cassette,  
BCT-D6/D12/D22/D32/D40 Series  
Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:  
10 bits/sample  
Error correction:  
Reed-Solomon code  
Error concealment:  
Adaptive three dimensional

Digital video performance  
Bandwidth:  
Y: 5.75 MHz ±0.5 dB, R-Y/B-Y: 2.75 MHz ±0.5 dB  
S/N ratio:  
More than 62 dB  
k-factor (2T pulse):  
Less than 1%  
Linearity:  
Less than 2%  
Y/R-Y/B-Y delay:  
Less than 15 ns

Digital audio performance  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
20 bits/sample  
A/D and D/A quantization:  
16 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5 dB/-0.8 dB  
Dynamic range:  
More than 85 dB(emphasis ON)  
Distortion (at 1 kHz, emphasis ON, reference level):  
Less than 0.08%  
Crosstalk (at 1 kHz, reference level):  
Less than -70 dB

Wow and flutter:  
Below measurable limit  
Head room:  
20 dB (ex-factory setting)  
Emphasis (ON/OFF selectable):  
T1=50 μs, T2=15 μs  
Analog audio performance (Cue track)  
Frequency response:  
100 Hz to 12 kHz ±3 dB  
S/N ratio:  
More than 50 dB at 3% distortion level  
Distortion:  
Less than 1.5%(T.H.D at 1 kHz reference level)  
Wow and flutter:  
Less than 0.2%

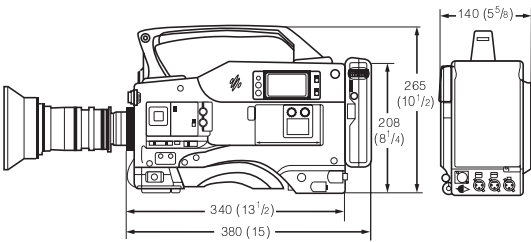
Camera section

Pickup device:  
3-chip 2/3-inch type widescreen Power HAD 1000 IT CCD  
Picture elements:  
1038(H) x 504(V)  
Optical system:  
F1.4 prism system  
Built-in filters:  
1: CLEAR 2: 1/4 ND 3: 1/16 ND 4: 1/64 ND  
A: CROSS B: 3200 K C: 4300 K D: 6300 K

Shutter speed:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000(s)  
Lens mount:  
Special bayonet mount  
Sensitivity (2000 lx with F8.0, 89.9% reflective):  
F9.0(Typical) Equivalent to ISO 500 or more  
Minimum illumination:  
Approx. 0.2 lx(F1.4 lens, +48 dB Turbo Gain)  
Smear level:  
-120 dB  
S/N ratio:  
65 dB (typical)  
Vertical resolution  
Without EVS:  
400 TV lines  
With EVS:  
450 TV lines  
Registration:  
0.05% (all zones, without lens)  
Geometric distortion:  
Below measurable level (Without lens)  
Warm-up time:  
2 s  
Modulation depth at 5 MHz  
16:9 mode:  
More than 65%  
4:3 mode:  
More than 55%

Viewfinder

CRT:  
2-inch type monochrome  
Controls:  
BRIGHT control, CONTRAST control, PEAKING control, TALLY, ZEBRA, DISPLAY switches  
Horizontal resolution:  
450 TV lines (16:9)  
Microphone:  
Ultra-directional (detachable)



Unit: mm (inch)

Digital Betacam Camcorders

## Digital Betacam Camcorders

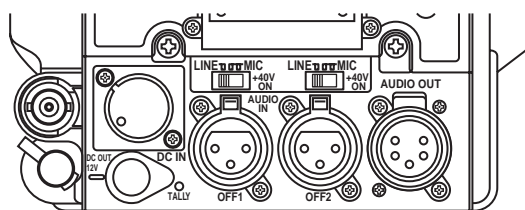
### DVW-709WSP Digital Betacam 16:9/4:3 Switchable Camcorder

#### Features

- Superb picture and sound quality of Digital Betacam format
- 12-bit A/D converter
- High performance ADSP (Advanced Digital Signal Processing) camcorder
- Combines digital signal processing camera circuitry with 2/3-inch type 16:9/4:3 widescreen Power HAD 1000 IT CCD (each with 620,000 picture elements)
- 40 minutes of recording time on S-cassette
- Multi Matrix function for color correction
- Turbo Gain function
- Auto Tracing White Balance (ATW) capability
- TruEye Process for faithful color reproduction
- Selectable gamma curve for more natural tonal reproduction
- Color temperature control allows the color balance of a picture to be changed to make it warmer or colder
- Assignable button for ATW, RET, REC, Turbo Gain and other functions
- Setup Card system to store setup parameters made via the camera head menu system
- Internal light system powered from the camcorder's lithium-ion battery
- Optical filter wheels for ND (Neutral Density) and CC (Color Conversion)
- Variable speed electronic shutter
- Clear Scan function for shooting computer displays
- Enhanced Vertical Definition System (EVS) for vertical resolution of 530 TV lines
- Shot Data Recording of date and time of shooting, shot ID, cassette number and so on
- Playback capability of full color video and audio without an adapter
- Basic camera control from RM-B150 remote control unit
- Compact and lightweight, approx. 7 kg including viewfinder, battery, cassette, microphone and lens
- Low power consumption of 31.5 W



\*Lens is optional



#### Supplied Accessories

Microphone (1)  
Shoulder belt (1)  
Lens cap (1)  
XLR cap (4)  
Maintenance manual (1)  
Operation manual (1)  
BVF-V10CE 1.5-inch Type B/W Viewfinder (CCIR) (1)

#### Optional Accessories

RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
WLL-CA50 Wireless Camera Transmitter (CER)  
BKDW-701 Servo Filter Unit  
CA-701 Camcorder Adaptor  
CA-702 Camcorder Adaptor  
CA-755 Camcorder Adaptor  
CA-755P Camcorder Adaptor  
AC-DN1 AC Adaptor  
AC-DN2A AC Adaptor  
AC-DN2B AC Adaptor  
AC-DN10 AC Adaptor/Charger  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BC-L120 Lithium-ion Battery Charger

BC-M50 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
BSC-1-PACK Setup Card  
BVF-VC10W 1.35-inch Type Color Viewfinder  
CCXA Cable Audio Cable  
LC-777 Carrying Case  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-861A UHF Synthesized Diversity Tuner (AU)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

#### Optional Boards

BKDW-702 SDI Output Board  
BKDW-703 Picture Cache Board  
For mounting WRR-855A/855B, an adaptor is required.

Digital Betacam Camcorders

Specifications

General

Mass:  
Approx. 5.0 kg (11 lb 1 oz)  
Operating mass:  
Approx. 7.0 kg (15 lb 7 oz)  
Power requirements:  
DC 12 V +5.0/-1.0 V  
Power consumption:  
31.5 W  
Operating temperature:  
0 to +40 °C (+32 to +104 °F)  
Storage temperature:  
-20 to +60 °C (-4 to +140 °F)  
Humidity:  
25 to 85% (relative humidity)  
Continuous operating time:  
Approx. 125 min (with BP-L60A)  
Approx. 190 min (with BP-L90A)

Signal inputs

Genlock video input:  
BNC(1), 1.0 Vp-p, 75 Ω  
Time code input:  
BNC(1), 0.5 to 18 Vp-p, 10 kΩ  
Audio input (CH-1/2):  
XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced  
Microphone input:  
XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced

Signal outputs

Video output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Video test output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Time code output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Earphone:  
Mini jack  
Audio output (CH-1/2):  
XLR 5-pin male(stereo)

Others

Lens:  
12-pin  
Remote:  
8-pin  
Light:  
2-pin, DC 12 V, max. 50 W  
DC input:  
XLR 4-pin (for the optional AC-550CE)  
DC output:  
4-pin (for wireless microphone receiver),  
DC 12 V  
Camcorder adapter:  
40-pin

VTR section

General  
Recording format:  
Digital BETACAM  
Tape speed:  
96.7 mm/s  
Playback/Recording time:  
Max. 40 min (with BCT-D40 cassette)  
Fast forward time:  
Less than 6 min (with BCT-D40 cassette)  
Rewind time:  
Less than 5 min (with BCT-D40 cassette)  
Recommended tape:  
Sony Digital Betacam S cassette,  
BCT-D6/D12/D22/D32/D40 Series  
Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:  
10 bits/sample  
Error correction:  
Reed-Solomon code  
Error concealment:  
Adaptive three dimensional

Digital video performance  
Bandwidth:  
Y: 5.75 MHz ±0.5 dB, R-Y/B-Y: 2.75 MHz ±0.5 dB  
S/N ratio:  
More than 62 dB  
k-factor (2T pulse):  
Less than 1%  
Linearity:  
Less than 2%  
Y/R-Y/B-Y delay:  
Less than 15 ns

Digital audio performance  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
20 bits/sample  
A/D and D/A quantization:  
16 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5 dB/-0.8 dB  
Dynamic range:  
More than 85 dB(emphasis ON)  
Distortion (at 1 kHz, emphasis ON, reference level):  
Less than 0.08%  
Crosstalk (at 1 kHz, reference level):  
Less than -70 dB

Wow and flutter:  
Below measurable limit  
Head room:  
20 dB (ex-factory setting)  
Emphasis (ON/OFF selectable):  
T1=50 μs, T2=15 μs  
Analog audio performance (Cue track)  
Frequency response:  
100 Hz to 12 kHz ±3 dB  
S/N ratio:  
More than 50 dB at 3% distortion level  
Distortion:  
Less than 1.5%(T.H.D at 1 kHz reference level)  
Wow and flutter:  
Less than 0.2%

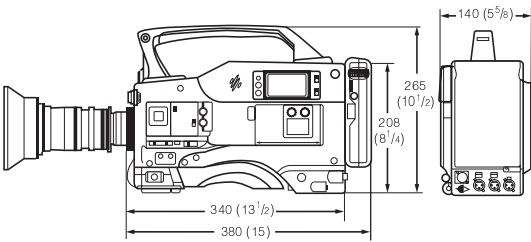
Camera section

Pickup device:  
3-chip 2/3-inch type widescreen Power HAD 1000 IT CCD  
Picture elements:  
1038(H) x 594(V)  
Optical system:  
F1.4 prism system  
Built-in filters:  
1: CLEAR 2: 1/4 ND 3: 1/16 ND 4: 1/64 ND  
A: CROSS B: 3200 K C: 4300 K D: 6300 K

Shutter speed:  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000(s)  
Lens mount:  
Special bayonet mount  
Sensitivity (2000 lx with F8.0, 89.9% reflective):  
F9.0(Typical) Equivalent to ISO 500 or more  
Minimum illumination:  
Approx. 0.2 lx(F1.4 lens, +48 dB Turbo Gain)  
Smear level:  
-120 dB  
S/N ratio:  
63 dB (typical)  
Vertical resolution  
Without EVS:  
480 TV lines  
With EVS:  
530 TV lines  
Registration:  
0.05% (all zones, without lens)  
Geometric distortion:  
Below measurable level (Without lens)  
Warm-up time:  
2 s  
Modulation depth at 5 MHz  
16:9 mode:  
More than 65%  
4:3 mode:  
More than 55%

Viewfinder

CRT:  
2-inch type monochrome  
Controls:  
BRIGHT control, CONTRAST control, PEAKING control, TALLY, ZEBRA, DISPLAY switches  
Horizontal resolution:  
450 TV lines (16:9)  
Microphone:  
Ultra-directional (detachable)



Unit: mm (inch)

## Digital Betacam Camcorders

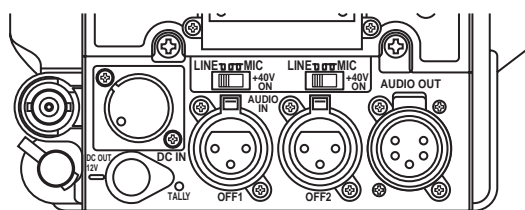
### DVW-790WS Digital Betacam 16:9/4:3 Switchable Camcorder

#### Features

- Superb picture and sound quality of Digital Betacam format
- 12-bit A/D converter
- High performance ADSP (Advanced Digital Signal Processing) camcorder
- Combines digital signal processing camera circuitry with 2/3-inch type 16:9/4:3 widescreen Power HAD 1000 FIT CCD (each with 520,000 picture elements)
- 40 minutes of recording time on S-cassette
- Multi Matrix function for color correction
- Turbo Gain function
- Auto Tracing White Balance (ATW) capability
- TruEye Process for faithful color reproduction
- Selectable gamma curve for more natural tonal reproduction
- Color temperature control allows the color balance of a picture to be changed to make it warmer or colder
- Assignable button for ATW, RET, REC, Turbo Gain and other functions
- Setup Card system to store setup parameters made via the camera head menu system
- Internal light system powered from the camcorder's lithium-ion battery
- Optical filter wheels for ND (Neutral Density) and CC (Color Conversion)
- Variable speed electronic shutter
- Clear Scan function
- Extended Clear Scan function
- Enhanced Vertical Definition System (EVS) for vertical resolution of 450 TV lines
- Shot Data Recording of date and time of shooting, shot ID, cassette number and so on.
- Playback capability of full color video and audio without an adapter
- Basic camera control from RM-B150 remote control unit
- Compact and lightweight, approx. 7 kg including viewfinder, battery, cassette, microphone and lens
- Low power consumption of 32 W



Lens and battery are optional.



#### Supplied Accessories

Microphone (1)  
Shoulder belt (1)  
Lens cap (1)  
XLR cap (4)  
Maintenance manual (1)  
Operation manual (1)  
BVF-V10 1.5-inch Type BW Viewfinder (EIA) (1)

#### Optional Accessories

RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
WLL-CA50 Wireless Camera Transmitter (UC)  
BKDW-701 Servo Filter Unit  
CA-701 Camcorder Adaptor  
CA-702 Camcorder Adaptor  
CA-755 Camcorder Adaptor  
AC-DN1 AC Adaptor  
AC-DN2A AC Adaptor  
AC-DN2B AC Adaptor  
AC-DN10 AC Adaptor/Charger  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BC-L120 Lithium-ion Battery Charger  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger

#### BSC-1-PACK Setup Card

BVF-VC10W 1.35-inch Type Color Viewfinder  
CCXA Cable Audio Cable  
LC-777 Carrying Case  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
WRR-855B UHF Synthesized Diversity Tuner (1416U)  
WRR-855B UHF Synthesized Diversity Tuner (3032U)  
WRR-855B UHF Synthesized Diversity Tuner (6264U)  
WRR-855B UHF Synthesized Diversity Tuner (6668U)  
WRR-861A UHF Synthesized Diversity Tuner (AU)  
WRR-861B UHF Synthesized Diversity Tuner (U6264)  
WRR-861B UHF Synthesized Diversity Tuner (U6668)  
WRR-862B UHF Synthesized Dual Diversity Tuner (1416U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (3032U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)  
WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

#### Optional Boards

BKDW-702 SDI Output Board  
BKDW-703 Picture Cache Board

For mounting WRR-855A/855B, an adaptor is required.

Digital Betacam Camcorders

Specifications

General

Mass:  
Approx. 5.0 kg (11 lb 1 oz)  
Operating mass:  
Approx. 7.0 kg (15 lb 7 oz)  
Power requirements:  
DC 12 V +5.0/-1.0 V  
Power consumption:  
32 W  
Operating temperature:  
0 to +40 °C (+32 to +104 °F)  
Storage temperature:  
-20 to +60 °C (-4 to +140 °F)  
Humidity:  
25 to 85 % (relative humidity)  
Continuous operating time:  
Approx. 120 min (with BP-L60A)  
Approx. 185 min (with BP-L90A)

Signal inputs

Genlock video input:  
BNC(1), 1.0 Vp-p, 75 Ω  
Time code input:  
BNC(1), 0.5 to 18 Vp-p, 10 kΩ  
Audio input (CH-1/2):  
XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced  
Microphone input:  
XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced

Signal outputs

Video output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Video test output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Time code output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Earphone:  
Mini jack  
Audio output (CH-1/2):  
XLR 5-pin male(stereo)

Others

Lens:  
12-pin  
Remote:  
8-pin  
Light:  
2-pin, DC 12 V, max. 50 W  
DC input:  
XLR 4-pin (for the optional AC-550)  
DC output:  
4-pin (for wireless microphone receiver),  
DC 12 V  
Camcorder adapter:  
40-pin

VTR section

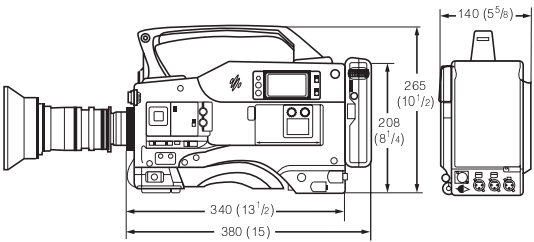
General  
Recording format:  
Digital BETACAM  
Tape speed:  
96.7mm/s  
Playback/Recording time:  
Max. 40 min (with BCT-D40 cassette)  
Fast forward time:  
Less than 6 min (with BCT-D40 cassette)  
Rewind time:  
Less than 5 min (with BCT-D40 cassette)  
Recommended tape:  
Sony Digital Betacam S cassette,  
BCT-D6/D12/D22/D32/D40 Series  
Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:  
10 bits/sample  
Error correction:  
Reed-Solomon code  
Error concealment:  
Adaptive three dimensional  
Digital video performance  
Bandwidth:  
Y: 5.75 MHz ±0.5 dB, R-Y/B-Y: 2.75 MHz ±0.5 dB  
S/N ratio:  
More than 62 dB  
k-factor(2T pulse):  
Less than 1%  
Linearity:  
Less than 2%  
Y/R-Y/B-Y delay:  
Less than 15 ns  
Digital audio performance  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
20 bits/sample  
A/D and D/A quantization:  
16 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5 dB/-0.8 dB  
Dynamic range:  
More than 85 dB(emphasis ON)  
Distortion (at 1 kHz, emphasis ON, reference level):  
Less than 0.08%  
Crosstalk (at 1 kHz, reference level):  
Less than -70 dB  
Wow and flutter:  
Below measurable limit  
Head room:  
20 dB (ex-factory setting)  
Emphasis (ON/OFF selectable):  
T1=50 μs, T2=15 μs  
Analog audio performance (cue track)  
Frequency response:  
100 Hz to 12 kHz ±3 dB  
S/N ratio:  
More than 50 dB at 3% distortion level  
Distortion:  
Less than 1.5%(T.H.D at 1 kHz reference level)  
Wow and flutter:  
Less than 0.2%

Camera section

Pickup device:  
3-chip 2/3-inch widescreen Power HAD  
1000 FIT CCD  
Picture elements:  
1038(H) x 504(V)  
Optical system:  
F1.4 prism system  
Built-in filters:  
1: CLEAR 2: 1/4 ND 3: 1/16 ND 4: 1/64 ND  
A: CROSS B: 3200 K C: 4300 K D: 6300 K

Shutter speed:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000(s)  
Lens mount:  
Special bayonet mount  
Sensitivity (2000 lx with F8.0, 89.9 % reflective):  
F9.0(Typical) Equivalent to ISO 500 or more  
Minimum illumination:  
Approx. 0.2 lx(F1.4 lens, +48 dB Turbo Gain)  
Smear level:  
-140 dB  
S/N ratio:  
65 dB (typical)  
Vertical resolution  
Without EVS:  
400 TV lines  
With EVS:  
450 TV lines  
Registration:  
0.05% (All zones, without lens)  
Geometric distortion:  
Below measurable level (Without lens)  
Warm-up time:  
2 s  
Modulation depth at 5 MHz:  
16:9 mode:  
More than 65%  
4:3 mode:  
More than 55%  
**Viewfinder**  
CRT:  
2-inch type monochrome  
Controls:  
BRIGHT control, CONTRAST control, PEAKING control, TALLY, ZEBRA, DISPLAY switches  
Horizontal resolution:  
450 TV lines (16:9)  
Microphone:  
Ultra-directional (Detachable)



\*Unit: mm (inch)

## Digital Betacam Camcorders

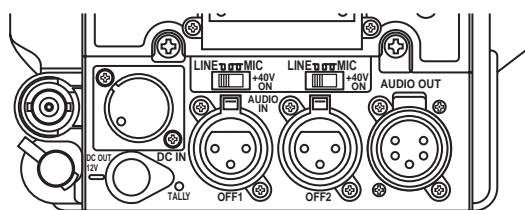
### DVW-790WSP Digital Betacam 16:9/4:3 Switchable Camcorder

#### Features

- Superb picture and sound quality of Digital Betacam format
- 12-bit A/D converter
- High performance ADSP (Advanced Digital Signal Processing) camcorder
- Combines digital signal processing camera circuitry with 2/3-inch type 16:9/4:3 widescreen Power HAD 1000 FIT CCD (each with 620,000 picture elements)
- 40 minutes of recording time on S-cassette
- Multi Matrix function for color correction
- Turbo Gain function
- Auto Tracing White Balance (ATW) capability
- TruEye Process for faithful color reproduction
- Selectable gamma curve for more natural tonal reproduction
- Color temperature control allows the color balance of a picture to be changed to make it warmer or colder
- Assignable button for ATW, RET, REC, Turbo Gain and other functions
- Setup Card system to store setup parameters made via the camera head menu system
- Internal light system powered from the camcorder's lithium-ion battery
- Optical filter wheels for ND (Neutral Density) and CC (Color Conversion)
- Variable speed electronic shutter
- Clear Scan function
- Extended Clear Scan function
- Enhanced Vertical Definition System (EVS) for vertical resolution of 530 TV lines
- Shot Data Recording of date and time of shooting, shot ID, cassette number and so on.
- Playback capability of full color video and audio without an adapter
- Basic camera control from RM-B150 remote control unit
- Compact and lightweight, approx. 7 kg including viewfinder, battery, cassette, microphone and lens
- Low power consumption of 32 W



Lens and battery are optional.



#### Supplied Accessories

Microphone (1)  
Shoulder belt (1)  
Lens cap (1)  
XLR cap (4)  
Maintenance manual (1)  
Operation manual (1)  
BVF-V10CE 1.5-inch Type B/W Viewfinder (CCIR) (1)

#### Optional Accessories

RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
WLL-CA50 Wireless Camera Transmitter (CER)  
BKDW-701 Servo Filter Unit  
CA-701 Camcorder Adaptor  
CA-702 Camcorder Adaptor  
CA-755 Camcorder Adaptor  
CA-755P Camcorder Adaptor  
AC-DN1 AC Adaptor  
AC-DN2A AC Adaptor  
AC-DN2B AC Adaptor  
AC-DN10 AC Adaptor/Charger  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BC-L120 Lithium-ion Battery Charger

BC-M50 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
BSC-1-PACK Setup Card  
BVF-VC10W 1.35-inch Type Color Viewfinder  
CCXA Cable Audio Cable  
LC-777 Carrying Case  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-861A UHF Synthesized Diversity Tuner (AU)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)

#### Optional Boards

BKDW-702 SDI Output Board  
BKDW-703 Picture Cache Board  
For mounting WRR-855A/855B, an adaptor is required.

Digital Betacam Camcorders

Specifications

General

Mass:  
Approx. 5.0 kg (11 lb 1 oz)  
Operating mass:  
Approx. 7.0 kg (15 lb 7 oz)  
Power requirements:  
DC 12 V +5.0/-1.0 V  
Power consumption:  
32 W  
Operating temperature:  
0 to +40 °C (+32 to +104 °F)  
Storage temperature:  
-20 to +60 °C (-4 to +140 °F)  
Humidity:  
25 to 85 % (relative humidity)  
Continuous operating time:  
Approx. 120 min (with BP-L60A)  
Approx. 185 min (with BP-L90A)

Signal inputs

Genlock video input:  
BNC(1), 1.0 Vp-p, 75 Ω  
Time code input:  
BNC(1), 0.5 to 18 Vp-p, 10 kΩ  
Audio input (CH-1/2):  
XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced  
Microphone input:  
XLR 3-pin(2), -60 dBm/+4 dBm selectable,  
high impedance, balanced

Signal outputs

Video output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Video test output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Time code output:  
BNC(1), 1.0 Vp-p, 75 Ω  
Earphone:  
Mini jack  
Audio output (CH-1/2):  
XLR 5-pin male(stereo)

Others

Lens:  
12-pin  
Remote:  
8-pin  
Light:  
2-pin, DC 12 V, max. 50 W  
DC input:  
XLR 4-pin (for the optional AC-550CE)  
DC output:  
4-pin (for wireless microphone receiver),  
DC 12 V  
Camcorder adapter:  
40-pin

VTR section

General  
Recording format:  
Digital BETACAM  
Tape speed:  
96.7mm/s  
Playback/Recording time:  
Max. 40 min (with BCT-D40 cassette)  
Fast forward time:  
Less than 6 min (with BCT-D40 cassette)  
Rewind time:  
Less than 5 min (with BCT-D40 cassette)  
Recommended tape:  
Sony Digital Betacam S cassette,  
BCT-D6/D12/D22/D32/D40 Series  
Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:  
10 bits/sample  
Error correction:  
Reed-Solomon code  
Error concealment:  
Adaptive three dimensional

Digital video performance  
Bandwidth:  
Y: 5.75 MHz ±0.5 dB, R-Y/B-Y: 2.75 MHz ±0.5 dB  
S/N ratio:  
More than 62 dB  
k-factor(2T pulse):  
Less than 1%  
Linearity:  
Less than 2%  
Y/R-Y/B-Y delay:  
Less than 15 ns

Digital audio performance  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
20 bits/sample  
A/D and D/A quantization:  
16 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5 dB/-0.8 dB  
Dynamic range:  
More than 85 dB(emphasis ON)  
Distortion (at 1 kHz, emphasis ON, reference level):  
Less than 0.08%  
Crosstalk (at 1 kHz, reference level):  
Less than -70 dB

Wow and flutter:  
Below measurable limit  
Head room:  
20 dB (ex-factory setting)  
Emphasis (ON/OFF selectable):  
T1=50 μs, T2=15 μs  
Analog audio performance (cue track)  
Frequency response:  
100 Hz to 12 kHz ±3 dB  
S/N ratio:  
More than 50 dB at 3% distortion level  
Distortion:  
Less than 1.5%(T.H.D at 1 kHz reference level)  
Wow and flutter:  
Less than 0.2%

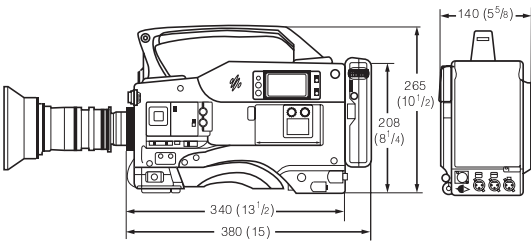
Camera section

Pickup device:  
3-chip 2/3-inch widescreen Power HAD  
1000 FIT CCD  
Picture elements:  
1038(H) x 594(V)  
Optical system:  
F1.4 prism system  
Built-in filters:  
1: CLEAR 2: 1/4 ND 3: 1/16 ND 4: 1/64 ND  
A: CROSS B: 3200 K C: 4300 K D: 6300 K

Shutter speed:  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000(s)  
Lens mount:  
Special bayonet mount  
Sensitivity (2000 lx with F8.0, 89.9 % reflective):  
F9.0(Typical) Equivalent to ISO 500 or more  
Minimum illumination:  
Approx. 0.2 lx(F1.4 lens, +48 dB Turbo Gain)  
Smear level:  
-140 dB  
S/N ratio:  
63 dB (typical)  
Vertical resolution  
Without EVS:  
480 TV lines  
With EVS:  
530 TV lines  
Registration:  
0.05% (All zones, without lens)  
Geometric distortion:  
Below measurable level (Without lens)  
Warm-up time:  
2 s  
Modulation depth at 5 MHz:  
16:9 mode:  
More than 65%  
4:3 mode:  
More than 55%

Viewfinder

CRT:  
2-inch type monochrome  
Controls:  
BRIGHT control, CONTRAST control, PEAKING control, TALLY, ZEBRA, DISPLAY switches  
Horizontal resolution:  
450 TV lines (16:9)  
Microphone:  
Ultra-directional (Detachable)



\*Unit: mm (inch)

Digital Betacam Camcorders



Digital Betacam Camcorders

MPEG IMX Camcorders

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MPEG IMX Camcorders

## MPEG IMX Camcorders

### MSW-970 MPEG IMX camcorder

The MSW-970 MPEG IMX Camcorder is an ideal solution for a variety of production and postproduction applications. The MSW-970 inherits the full functionality of the MSW-900, which operate on MPEG-2 4:2:2 P@ML, I-frame-only compression. Maintaining its core concept as the workhorse model for ENG (Electronic News Gathering) and EFP (Electronic Field Production) operations, the MSW-970 brings a new level of creativity and quality into many production fields.

#### Features

- High picture quality using MPEG-2 4:2:2P@ML 50 mb/s i-frame compression
- Power HAD EX CCD
- 14-bit A/D conversion
- Long recording times
- High-quality audio recordings
- Compact, lightweight, and low power consumption
- Camera remote control
- Dual optical filters plus electric color correction
- Assignable functions
- Battery remaining display on viewfinder
- Intelligent light system
- Slot-in mechanism for wireless microphone receiver
- Turbo gain
- Memory Stick system stores camera setup parameters
- Adjustable shoulder pad
- Film-like images with progressive mode
- Slow shutter
- Picture cache recording
- TruEye processor
- Adaptive highlight control
- Selectable gamma table including film-like gamma
- Triple skin tone detail control
- Variable black gamma range
- Auto tracing white balance (ATW)
- Multi-matrix function
- Electronic soft focus
- Color temperature control
- UMID\*1 recording
- Essence mark handling



Lens and battery are optional.

#### Supplied Accessories

Operation manual (1)  
XLR connector cap (4)  
Viewfinder (1)  
Lens cap (1)  
Shoulder belt (1)  
monaural microphone (1)

#### Optional Accessories

CBK-SD01 SDI Output Board  
CBK-FC01 Pull-down (24P shooting) Board  
MSDW-903 Picture Cache Board  
MSDW-904 Analog Composite Input Board  
BKW-401 Viewfinder Rotation Bracket  
RM-B150 Remote Control Unit  
RM-B750 Remote Control Unit  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
MSH "Memory Stick" IC Memory Media  
BCT-MX tapes BCT-MX Series MPEG IMX Tapes  
VCT-14 Tripod Adaptor  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (66U)

WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)  
ECM-670 Electret Condenser Microphone  
ECM-670 Electret Condenser Microphone (E)  
ECM-670 Electret Condenser Microphone (U)  
ECM-672 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone (E)  
ECM-672 Electret Condenser Microphone (U)  
ECM-674 Electret Condenser Microphone  
ECM-678 Electret Condenser Microphone  
WLL-RX55 Wireless Camera Receiver  
WLL-CA50 Wireless Camera Transmitter (CER)  
WLL-CA50 Wireless Camera Transmitter (UC)

MPEG IMX Camcorders

Specifications

General

Mass

Approx. 3.7 kg (8 lb 3 oz)  
5.4 kg (with VF, Mic, BCT-60MX, BP-GL95)  
(11 lb 14 oz)

Power requirements

DC 12 V +5.0 V/-1.0 V

Power consumption

Approx. 27 W (with DC 12V power supply,  
REC mode with VF)

Operating temperature

0 to 40°C (+32°F to +104°F)

Storage temperature

-20 to +60 °C (-4 °F to +140 °F)

Humidity

25 to 85% (relative humidity)

Continuous operating time

Approx. 180 min with BP-GL95 battery at  
25 °C (77 °F), REC mode

Signal inputs

Genlock video

BNC type x1, 1.0 Vp-p, 75 Ω

Time code input

BNC type x1, 0.5 to 18 Vp-p, 10 kΩ

Video outputs

SDI

BNC type x1, 0.8 Vp-p, 75 Ω (with the  
CBK-SD01)

Audio input (CH-1/2)

XLR-3-31 type x2, -60/-50/+4 dBu  
selectable, high impedance, balanced (0  
dBu = 0.775 Vrms.)

Mic input

XLR-3-31 type x1, -60/-50 dBu

Signal outputs

Video output (Analog composite)

BNC type x1, 1.0 Vp-p, 75 Ω

Video test output

BNC type x1, 1.0 Vp-p, 75 Ω

Time code output

BNC type x1, 1.0 Vp-p, 75 Ω

Earphone

Minijack x2

Audio output (CH-1/CH-2)

XLR-5-pin male (stereo)

Others

Lens

12-pin

VF

20-pin

Remote

8-pin

Light

2-pin, DC 12 V, max. 50 W

DC input

XLR-4-pin (male, DC 11 to 17V )

DC output

4-pin (for wireless microphone receiver),  
DC 12 V (max. 0.1 A)

Battery terminal

5-pin

Wireless receiver input

D-Sub 15-pin

VTR section

Recording format

Video

MPEG IMX (50/40/30 Mb/s)

Audio

4 ch/16 bits/48 kHz, 4 ch/20 bits/48 kHz

Tape speed

64.467 mm/s

Playback/Recording time

Max. 60 min. with BCT-60MX cassette

Fast forward time

Approx. 5 min. with BCT-60MX

Rewind time

Approx. 5 min. with BCT-60MX

Recommended tape

Sony MPEG IMX S cassette  
(BCT-6MX/12MX/22MX/32MX/60MX)

Digital video performance

Sampling frequency

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization

8 bits/sample

K-factor (2T pulse)

Less than 1%

Y/R-Y/B-Y delay

Less than 15 ns

Digital audio performance

Sampling frequency

48 kHz (synchronised with video)

Quantization

20/16bits/ sample (selectable)

Frequency response

20 Hz to 20 kHz, +0.5 dB/-1.0 dB

Dynamic range

More than 85 dB (emphasis ON)

Distortion (at 1 kHz, emphasis ON, reference level)

Less than 0.08%

Cross talk (at 1 kHz, reference level)

Less than -70 dB

Wow & flutter

Below measurable limit

Head room

20 dB (ex-factory setting)

Camera section

Pickup device

3-chip 2/3-inch type Power HAD EX CCD

Aspect ratio

16:9/4:3 switchable

Total picture elements

1038 (H) x 1008 (V)

Optical system

F1.4 prism (with quartz filter)

Built-in optical filters

1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND,  
A: CROSS, B: 3200K, C: 4300K, D: 6300K

Lens mount

2/3 inch type Sony bayonet mount

Scan format

525/59.94i, 525/29.97p, 525/23.976p

Sensitivity (2000 lx, 89.9% reflectance)

F11 (typical) (2000 lx, 89.9% reflectance)

Minimum illumination

0.008 lx (F1.4 lens, +48 dB gain, with slow  
shutter mode at 16-frame accumulation)

Smear level

-145 dB (typical)

Video S/N ratio

65 dB (typical)

Vertical resolution

450 TV lines (with EVS) and 400 TV lines  
(without EVS) at 525/59.94i mode

485 TV lines at 525/29.97p and

525/23.976p modes

Shutter speed

1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000  
s at 525/59.94i mode  
1/40, 1/60, 1/120, 1/125, 1/250, 1/500,  
1/1000, 1/2000 s at 525/29.97p mode  
1/32, 1/48, 1/96, 1/125, 1/250, 1/500,  
1/1000, 1/2000 s at 525/23.976 mode

ECS

60 to 6000 Hz at 525/59.94i mode, 30 to  
7000 Hz at 525/29.97 mode, 24 to 5000 Hz  
at 525/23.976 mode

Slow shutter

1/30, 1/15, 1/10, 1/7.5, 1/6, 1/4.3, 1/3.8,  
1/1.9 s (1 to 8, 16 frames)

Gain selection

-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB  
(for GAIN LOW, GAIN MID, GAIN HIGH  
and GAIN TURBO positions)

Registration

0.05% (all zones without lens)

Warm-up time

2 s

Modulation depth at 5MHz

70% (16:9, typical) /55% (4:3, typical)

Viewfinder

CRT

2.0-inch type monochrome

Controls

BRIGHT, CONTRAST, PEAKING controls,  
TALLY, ZEBRA, DISPLAY switches

Horizontal resolution

450 TV lines (16:9)

Microphone

Electret condenser microphone  
(Ultra-directional) (Detachable)

Supplied accessories

Operation manual (x1), Viewfinder (x1),  
Lens cap (x1), Shoulder belt (x1),  
Monaural microphone (x1), XLR connector  
cap (x4)

## MPEG IMX Camcorders

### MSW-970P MPEG IMX camcorder PAL model

The MSW-970P MPEG IMX Camcorder is an ideal solution for a variety of production and postproduction applications. The MSW-970P inherits the full functionality of the MSW-900P, which operate on MPEG-2 4:2:2 P@ML, I-frame-only compression. Maintaining its core concept as the workhorse model for ENG (Electronic News Gathering) and EFP (Electronic Field Production) operations, the MSW-970P brings a new level of creativity and quality into many production fields.

#### Features

- High picture quality using MPEG-2 4:2:2P@ML 50 mb/s i-frame compression
- Power HAD EX CCD
- 14-bit A/D conversion
- Long recording times
- High-quality audio recordings
- Compact, lightweight, and low power consumption
- Camera remote control
- Dual optical filters plus electric color correction
- Assignable functions
- Battery remaining display on viewfinder
- Intelligent light system
- Slot-in mechanism for wireless microphone receiver
- Turbo gain
- Memory Stick system stores camera setup parameters
- Adjustable shoulder pad
- Film-like images with progressive mode
- Slow shutter
- Picture cache recording
- TruEye processor
- Adaptive highlight control
- Selectable gamma table including film-like gamma
- Triple skin tone detail control
- Variable black gamma range
- Auto tracing white balance (ATW)
- Multi-matrix function
- Electronic soft focus
- Color temperature control
- UMID\*1 recording
- Essence mark handling



Lens and battery are optional.

#### Supplied Accessories

Operation manual (1)  
XLR connector cap (4)  
Viewfinder (1)  
Lens cap (1)  
Shoulder belt (1)  
monaural microphone (1)

#### Optional Accessories

CBK-SD01 SDI Output Board  
MSDW-903 Picture Cache Board  
MSDW-904 Analog Composite Input Board  
BKW-401 Viewfinder Rotation Bracket  
RM-B150 Remote Control Unit  
RM-B750 Remote Control Unit  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
MSH "Memory Stick" IC Memory Media  
BCT-MX tapes BCT-MX Series MPEG IMX Tapes  
VCT-14 Tripod Adaptor  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)

WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-862A UHF Synthesized Dual Diversity Tuner (AU)  
WRR-862B UHF Synthesized Dual Diversity Tuner (21CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (33CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (62CE7)  
WRR-862B UHF Synthesized Dual Diversity Tuner (67CE7)  
ECM-670 Electret Condenser Microphone  
ECM-670 Electret Condenser Microphone (E)  
ECM-670 Electret Condenser Microphone (U)  
ECM-672 Electret Condenser Microphone (E)  
ECM-672 Electret Condenser Microphone (U)  
ECM-674 Electret Condenser Microphone  
ECM-678 Electret Condenser Microphone  
WLL-RX55 Wireless Camera Receiver  
WLL-CA50 Wireless Camera Transmitter (CER)

## MPEG IMX Camcorders

### Specifications

#### General

##### Mass

Approx. 3.7 kg (8 lb 3 oz)  
5.4 kg (with VF, Mic, BCT-60MX, BP-GL95)  
(11 lb 14 oz)

##### Power requirements

DC 12 V +5.0 V/-1.0 V

##### Power consumption

Approx. 27 W (with DC 12V power supply,  
REC mode with VF)

##### Operating temperature

0 to 40°C (+32°F to +104°F)

##### Storage temperature

-20 to +60 °C (-4 °F to +140 °F)

##### Humidity

25 to 85% (relative humidity)

##### Continuous operating time

Approx. 180 min with BP-GL95 battery at  
25 °C (77 °F), REC mode

#### Signal inputs

##### Genlock video

BNC type x1, 1.0 Vp-p, 75  $\Omega$

##### Time code input

BNC type x1, 0.5 to 18 Vp-p, 10 k $\Omega$

##### Video outputs

###### SDI

BNC type x1, 0.8 Vp-p, 75  $\Omega$  (with the  
CBK-SD01)

##### Audio input (CH-1/2)

XLR-3-31 type x2, -60/-50/+4 dBu  
selectable, high impedance, balanced (0  
dBu = 0.775 Vrms.)

##### Mic input

XLR-3-31 type x1, -60/-50 dBu

#### Signal outputs

##### Video output (Analog composite)

BNC type x1, 1.0 Vp-p, 75  $\Omega$

##### Video test output

BNC type x1, 1.0 Vp-p, 75  $\Omega$

##### Time code output

BNC type x1, 1.0 Vp-p, 75  $\Omega$

##### Earphone

Minijack x2

##### Audio output (CH-1/CH-2)

XLR-5-pin male (stereo)

#### Others

##### Lens

12-pin

##### VF

20-pin

##### Remote

8-pin

##### Light

2-pin, DC 12 V, max. 50 W

##### DC input

XLR-4-pin (male, DC 11 to 17V )

##### DC output

4-pin (for wireless microphone receiver),  
DC 12 V (max. 0.1 A)

##### Battery terminal

5-pin

##### Wireless receiver input

D-Sub 15-pin

#### VTR section

##### Recording format

###### Video

MPEG IMX (50/40/30 Mb/s)

###### Audio

4 ch/16 bits/48 kHz, 4 ch/20 bits/48 kHz

##### Tape speed

64.467 mm/s

##### Playback/Recording time

Max. 71 min. with BCT-60MX cassette

##### Fast forward time

Approx. 5 min. with BCT-60MX

##### Rewind time

Approx. 5 min. with BCT-60MX

##### Recommended tape

Sony MPEG IMX S cassette  
(BCT-6MX/12MX/22MX/32MX/60MX)

#### Digital video performance

##### Sampling frequency

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

##### Quantization

8 bits/sample

##### K-factor (2T pulse)

Less than 1%

##### Y/R-Y/B-Y delay

Less than 15 ns

#### Digital audio performance

##### Sampling frequency

48 kHz (synchronised with video)

##### Quantization

20/16bits/ sample (selectable)

##### Frequency response

20 Hz to 20 kHz, +0.5 dB/-1.0 dB

##### Dynamic range

More than 85 dB (emphasis ON)

##### Distortion (at 1 kHz, emphasis ON, reference level)

Less than 0.08%

##### Cross talk (at 1 kHz, reference level)

Less than -70 dB

##### Wow & flutter

Below measurable limit

##### Head room

20 dB (ex-factory setting)

#### Camera section

##### Pickup device

3-chip 2/3-inch type Power HAD EX CCD

##### Aspect ratio

16:9/4:3 switchable

##### Total picture elements

1038 (H) x 1188 (V)

##### Optical system

F1.4 prism (with quartz filter)

##### Built-in optical filters

1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND,  
A: CROSS, B: 3200K, C: 4300K, D: 6300K

##### Lens mount

2/3 inch type Sony bayonet mount

##### Scan format

625/50i, 625/25p

##### Sensitivity (2000 lx, 89.9% reflectance)

F11 (typical) (2000 lx, 89.9% reflectance)

##### Minimum illumination

0.008 lx (F1.4 lens, +48 dB gain, with slow  
shutter mode at 16-frame accumulation)

##### Smear level

-145 dB (typical)

##### Video S/N ratio

63 dB (typical)

##### Vertical resolution

480 TV lines (with EVS) and 530 TV lines  
(without EVS) at 625/50i mode  
575 TV lines at 625/25p mode

##### Shutter speed

1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s  
at 625/50i mode  
1/33, 1/50, 1/100, 1/125, 1/250, 1/500,  
1/1000, 1/2000 s at 625/25p mode

##### ECS

50 to 6000 Hz at 625/50i mode, 25 to 6000  
Hz at 625/25p mode

##### Slow shutter

1/25, 1/12.5, 1/8.3, 1/6.3, 1/5, 1/4.2, 1/3.6,  
1/3.1, 1/1.6 s (1 to 8, 16 frames)

##### Gain selection

-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB  
(for GAIN LOW, GAIN MID, GAIN HIGH  
and GAIN TURBO positions)

##### Registration

0.05% (all zones without lens)

##### Warm-up time

2 s

##### Modulation depth at 5MHz

70% (16:9, typical) /55% (4:3, typical)

#### Viewfinder

##### CRT

2.0-inch type monochrome

##### Controls

BRIGHT, CONTRAST, PEAKING controls,  
TALLY, ZEBRA, DISPLAY switches

##### Horizontal resolution

450 TV lines (16:9)

##### Microphone

Electret condenser microphone  
(Ultra-directional) (Detachable)

#### Supplied accessories

Operation manual (x1), Viewfinder (x1),  
Lens cap (x1), Shoulder belt (x1),  
Monaural microphone (x1), XLR connector  
cap (x4)

MPEG IMX Camcorders

MPEG IMX Camcorders

Betacam SX Camcorders

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## Betacam SX Camcorders

### DNW-7 Betacam SX Camcorder

#### Features

- Superb picture and sound quality of Betacam SX format
- Component digital recording using MPEG-2 4:2:2P@ML compression algorithm
- Four channels of 16-bit/48 kHz digital audio
- 10-bit/28 MHz full digital signal processing in the camera head section
- Provides a longer recording time of up to 62 minutes on a single S-cassette
- Approximately 180 minutes of continuous operation with a BP-L90A lithium-ion battery and 120 minutes with a BP-L60A
- Compact and lightweight design, approximately 6 kg including battery, tape and lens
- 2/3-inch type Power HAD 1000 IT CCDs with 400K picture elements
- Auto Tracing White Balance (ATW) capability
- Turbo Gain function
- Shot Mark and REC Start Mark functions
- Variable speeds of electronic shutter
- Equipped with a lightweight, high resolution 1.5-inch(\*) type monochrome viewfinder
- Color playback in the field without an external adaptor
- Viewfinder playback
- Two-layer menu control system (User and Engineer menus)
- Setup Card system to store setup parameters on removable setup cards
- Slot-in mechanism for optional WRR-855A/855B wireless microphone receiver
- Interface with optional RM-P9 remote control unit
- Tally indication on viewfinder, front and back of camcorder

(\*) Viewable area measured diagonally



\*Lens, light, WRR-855A and battery are optional.



#### Supplied Accessories

Shoulder belt (1)  
Microphone (1)  
XLR cap (4)  
Operation manual (1)  
Maintenance manual <part 1> (1)

#### Optional Accessories

WLL-RX50 Wireless Camera Receiver  
WLL-CA50 Wireless Camera Transmitter (UC)  
BSC-1-PACK Setup Card  
BCT-SXA tapes Betacam SX Tapes  
WRR-810A UHF Synthesized Tuner (64U)  
WRR-810A UHF Synthesized Tuner (66U)  
WRR-810A UHF Synthesized Tuner (68U)  
WRR-810A UHF Synthesized Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (66U)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
WRR-855B UHF Synthesized Diversity Tuner (1416U)  
WRR-855B UHF Synthesized Diversity Tuner (3032U)  
WRR-855B UHF Synthesized Diversity Tuner (6264U)  
WRR-855B UHF Synthesized Diversity Tuner (6668U)  
WRR-860A UHF Synthesized Diversity Tuner (AU)  
WRR-860A UHF Synthesized Diversity Tuner (68U)

WRR-860A UHF Synthesized Diversity Tuner (68CA)  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger  
AC-DN2A AC Adaptor  
AC-DN2B AC Adaptor  
AC-DN10 AC Adaptor/Charger  
RM-P9 Remote Control Unit  
AC-550 AC Adaptor  
CA-701 Camcorder Adaptor  
CA-702 Camcorder Adaptor  
CA-755 Camcorder Adaptor  
LC-DN7 Carrying Case  
BVF-55 5-inch Type B/W Viewfinder (EIA)  
BVF-V10 1.5-inch Type B/W Viewfinder (EIA)  
BVF-V20W 2-inch Type B/W Viewfinder (EIA)  
BVF-VC10W 1.35-inch Type Color Viewfinder  
BKW-401 Viewfinder Rotation Bracket  
VCT-14 Tripod Adaptor  
CAC-6 Return Video Selector  
CCXA Cable Audio Cable

Betacam SX Camcorders

Specifications

General

Mass:  
4.0 kg (8 lb 13 oz)  
Operating mass:  
6.0 kg (13 lb 3 oz)  
Power requirements:  
DC 12 V +5.0/-1.0 V  
Power consumption:  
29 W (REC mode)  
Operating temperature:  
0 to +40°C (+32 to +104°F)  
Storage temperature:  
-20 to +60°C (-4 to +140°F)  
Humidity:  
25 to 85% (relative humidity)  
Continuous operating time:  
Approx. 120 min. (with BP-L60A)  
Approx. 165 min. (with BP-L90A)

Inputs/outputs

Genlock video input:  
BNC (1), 1.0 Vp-p, 75 Ω  
Time code input:  
BNC (1), 0.5 to 18 Vp-p, 10 kΩ  
Audio CH-1/2 input/microphone input:  
XLR-3-31 type (2), -60 dBu/+4 dBu selectable,  
high impedance, balanced  
Video output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative  
Test output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative  
Time code output:  
BNC (1), 1.0 Vp-p, 75 Ω  
Earphone:  
Mini jack  
Audio output:  
XLR 5-pin male (stereo)  
Lens:  
12-pin  
Remote:  
6-pin  
Light:  
2-pin, DC 12 V, max. 30 W  
DC input:  
XLR 4-pin male with switch (for the optional  
AC-550/550CE)  
DC output:  
4-pin (for wireless microphone receiver), DC  
12 V

VTR section

Recording format:  
Betacam SX  
Tape speed:  
59.515 mm/s (525 mode)  
Playback/recording time:  
Max. 62 min. (with BCT-62SXA cassette)  
Fast forward time:  
Approx. 5.5 min. (with BCT-62SXA cassette)  
Rewind time:  
Approx. 5 min. (with BCT-62SXA cassette)  
Recommended tape:  
Sony Betacam SX BCT-62SXA series  
Sony BCT-30MA series  
Sony UVWT-30MA series  
Sampling frequency:  
Y:  
13.5 MHz  
R-Y/B-Y:  
6.75 MHz  
Quantization:  
8 bits/sample  
Error correction:  
Reed-solomon code

Video performance  
K-factor (2T pulse):  
1% or less  
Y/R-Y/B-Y delay:  
15 ns or less  
Digital audio performance  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
16 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5 dB/-1.0 dB  
Dynamic range (emphasis ON):  
More than 85 dB  
Distortion (at 1 kHz, emphasis ON, reference  
level):  
Less than 0.08%  
Cross talk (at 1 kHz, reference level):  
Less than -70 dB  
Wow and flutter:  
Below measurable limit  
Head room:  
20 dB  
Emphasis (ON/OFF selectable):  
T1=50 μs , T2=15 μs

Camera section

Pickup device:  
3-chip 2/3-inch type Power HAD 1000 IT CCD  
Picture elements:  
811(H)×508(V)  
Optical system:  
F1.4 prism system  
Built-in filters:  
1: CLEAR 2: 5600K+1/8ND 3: 5600K 4:  
5600K+1/64ND  
Shutter speed:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)  
Clear scan:  
CLS: 60.0 to 10156 Hz (263 steps)  
Lens mount:  
Special bayonet mount  
Sensitivity (2000 lx, 89.9% reflective):  
F10  
Minimum illumination:  
0.3 lx (F1.4 lens, +42 dB Turbo Gain)  
S/N ratio (typical):  
63 dB  
Vertical resolution:  
(without EVS) 400 TV lines  
(with EVS) 450 TV lines  
Registration:  
0.05% (all zones, without lens)  
Geometric distortion:  
Below measurable level (without lens)  
Warm-up time:  
2 s  
Modulation depth at 5MHz:  
60% (Typical)

Viewfinder

CRT:  
1.5-inch type monochrome  
Controls:  
BRIGHT control, CONTRAST control, PEAKING  
control, TALLY, ZEBRA, DISPLAY switches  
Horizontal resolution:  
600 TV lines  
Microphone:  
Ultra-directional (detachable)

\*The specifications given above were measured by  
CA-701 camcorder adaptor

## Betacam SX Camcorders

### DNW-7P Betacam SX Camcorder

#### Features

- Superb picture and sound quality of Betacam SX format
- Component digital recording using MPEG-2 4:2:2P@ML compression algorithm
- Four channels of 16-bit/48 kHz digital audio
- 10-bit/28 MHz full digital signal processing in the camera head section
- Provides a longer recording time of up to 62 minutes on a single S-cassette
- Approximately 180 minutes of continuous operation with a BP-L90A lithium-ion battery and 120 minutes with a BP-L60A
- Compact and lightweight design, approximately 6 kg including battery, tape and lens
- 2/3-inch type Power HAD 1000 IT CCDs with 470K picture elements
- Auto Tracing White Balance (ATW) capability
- Turbo Gain function
- Shot Mark and REC Start Mark functions
- Variable speeds of electronic shutter
- Equipped with a lightweight, high resolution 1.5-inch(\*) type monochrome viewfinder
- Color playback in the field without an external adaptor
- Viewfinder playback
- Two-layer menu control system (User and Engineer menus)
- Setup Card system to store setup parameters on removable setup cards
- Slot-in mechanism for optional WRR-855A/855B wireless microphone receiver
- Interface for optional RM-P9 remote control unit
- Tally indication on viewfinder, front and back of camcorder

(\*) Viewable area measured diagonally



\*Lens, light, WRR-855A and battery are optional.



#### Supplied Accessories

Shoulder belt (1)  
Microphone (1)  
XLR cap (4)  
Operation manual (1)  
Maintenance manual <part 1> (1)

#### Optional Accessories

WLL-RX50 Wireless Camera Receiver  
WLL-CA50 Wireless Camera Transmitter (CER)  
BSC-1-PACK Setup Card  
BCT-SXA tapes Betacam SX Tapes  
WRR-810A UHF Synthesized Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-860A UHF Synthesized Diversity Tuner (AU)  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack

BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger  
AC-DN2A AC Adaptor  
AC-DN2B AC Adaptor  
AC-DN10 AC Adaptor/Charger  
RM-P9 Remote Control Unit  
AC-550CE AC Adaptor  
CA-701 Camcorder Adaptor  
CA-702P Camcorder Adaptor  
CA-755P Camcorder Adaptor  
LC-DN7 Carrying Case  
BVF-55CE 5-inch Type B/W Viewfinder (CCIR)  
BVF-V10CE 1.5-inch Type B/W Viewfinder (CCIR)  
BVF-V20WCE 2-inch Type B/W Viewfinder (CCIR)  
BVF-VC10W 1.35-inch Type Color Viewfinder  
BKW-401 Viewfinder Rotation Bracket  
VCT-14 Tripod Adaptor  
CAC-6 Return Video Selector  
CCXA Cable Audio Cable

Betacam SX Camcorders

Specifications

General

Mass:  
4.0 kg (8 lb 13 oz)  
Operating mass:  
6.0 kg (13 lb 3 oz)  
Power requirements:  
DC 12 V +5.0/-1.0 V  
Power consumption:  
29 W (REC mode)  
Operating temperature:  
0 to +40°C (+32 to +104°F)  
Storage temperature:  
-20 to +60°C (-4 to +140°F)  
Humidity:  
25 to 85% (relative humidity)  
Continuous operating time:  
Approx. 120 min (with BP-L60A)  
Approx. 165 min (with BP-L90A)

Inputs/outputs

Genlock video input:  
BNC (1), 1.0 Vp-p, 75 Ω  
Time code input:  
BNC (1), 0.5 to 18 Vp-p, 10k Ω  
Audio CH-1/2 input/microphone input:  
XLR-3-31 type (2), -60 dBu/+4 dBu  
selectable, high impedance, balanced  
Video output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative  
Test output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative  
Time code output:  
BNC (1), 1.0 Vp-p, 75 Ω  
Earphone:  
Mini jack  
Audio output:  
XLR 5-pin male (stereo)  
Lens:  
12-pin  
Remote:  
6-pin  
Light:  
2-pin, DC 12 V, max. 30 W  
DC input:  
XLR 4-pin male with switch (for the optional  
AC-550/550CE)  
DC output:  
4-pin (for wireless microphone receiver), DC  
12 V

VTR section

Recording format:  
Betacam SX  
Tape speed:  
59.715 mm/s (625 mode)  
Playback/recording time:  
Max. 62 min. (with BCT-62SXA cassette)  
Fast forward time:  
Approx. 5.5 min. (with BCT-62SXA cassette)  
Rewind time:  
Approx. 5 min. (with BCT-62SXA cassette)  
Recommended tape:  
Sony Betacam SX BCT-62SXA series  
Sony BCT-30MA series  
Sony UVWT-30MA series  
Sampling frequency:  
Y: 13.5 MHz  
R-Y/B-Y: 6.75 MHz  
Quantization:  
8 bits/sample  
Error correction:  
Reed-solomon code  
Video performance  
K-factor (2T pulse):  
1% or less

Y/R-Y/B-Y delay:  
15 ns or less  
Digital audio performance  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
16 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5 dB/-1.0 dB  
Dynamic range (emphasis ON):  
More than 85 dB  
Distortion (at 1kHz, emphasis ON, reference  
level):  
Less than 0.08%  
Cross talk (at 1kHz, reference level):  
Less than -70 dB  
Wow and flutter:  
Below measurable limit  
Head room:  
20 dB  
Emphasis (ON/OFF selectable):  
T1=50 μs , T2=15 μs

Camera section

Pickup device:  
3-chip 2/3-inch type Power HAD 1000 IT  
CCD  
Picture elements:  
795(H) x 596(V)  
Optical system:  
F1.4 prism system  
Built-in filters:  
1: CLEAR 2: 5600K+1/8ND 3: 5600K 4:  
5600K+1/64ND  
Shutter speed:  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)  
Clear scan:  
CLS: 50.0 to 10101 Hz (312 steps)  
Lens mount:  
Special bayonet mount  
Sensitivity (2000 lx, 89.9% reflective):  
F10  
Minimum illumination:  
0.3 lx (F1.4 lens, +42 dB Turbo Gain)  
S/N ratio (typical):  
61 dB  
Vertical resolution:  
(without EVS) 480 TV lines  
(with EVS) 530 TV lines  
Registration:  
0.05% (all zones, without lens)  
Geometric distortion:  
Below measurable level (without lens)  
Warm-up time:  
2 s  
Modulation depth at 5 MHz:  
60% (Typical)

Viewfinder

CRT:  
1.5-inch type monochrome  
Controls:  
BRIGHT control, CONTRAST control,  
PEAKING control, TALLY, ZEBRA, DISPLAY  
switches  
Horizontal resolution:  
600 TV lines  
Microphone:  
Ultra-directional (detachable)

\*The specifications given above were measured by  
CA-701 Camcorder Adaptor

Betacam SX Camcorders

## Betacam SX Camcorders

### DNW-9WS Betacam SX Camcorder

#### Features

- Superb picture and sound quality of Betacam SX format
- Component digital recording using MPEG-2 4:2:2 P@ML compression algorithm
- Four channels of 16-bit/48 kHz digital audio
- 10-bit/36 MHz full digital signal processing in the camera head section
- 16:9/4:3 switchable operation
- Provides a longer recording time of up to 62 minutes on a single S-cassette
- Current Betacam SP metal tape cassettes can be used for Betacam SX recording (with Betacam SX, the recording time of a Betacam SP tape is doubled)
- Approximately 165 minutes of continuous operation with a BP-L90A lithium-ion battery and 110 minutes with a BP-L60A
- Compact and lightweight, approximately 6 kg including battery, tape and lens
- Uses 2/3-inch switchable 16:9/4:3 widescreen Power HAD 1000 IT CCDs each with 520K picture elements
- Auto Tracing White balance (ATW) capability
- Turbo Gain function
- Shot Mark and REC Start Mark functions
- Variable speed electronic shutter
- Wide 2-inch(\*) type monochrome viewfinder with horizontal resolution of 600 TV lines in 4:3 mode and 450 TV lines in 16:9 mode
- Color playback in the field without an external adaptor
- Viewfinder playback
- Two-layer menu system (User and Engineer menus)
- Setup Card system to store setup parameters on removable setup cards
- Slot-in mechanism for optional WRR-855A/855B wireless microphone receiver
- Tally indication on viewfinder, front and back of camcorder
- Interface with optional RM-P9 remote control unit

(\*) Viewable area measured diagonally



\*Lens, light, WRR-855A and battery are optional. Lens with 'shrinker' function are recommended for WS models.



#### Supplied Accessories

Shoulder belt (1)  
Microphone (1)  
XLR cap (4)  
Maintenance manual <part 1> (1)  
Operation manual (1)

#### Optional Accessories

WLL-RX50 Wireless Camera Receiver  
WLL-CA50 Wireless Camera Transmitter (UC)  
BSC-1-PACK Setup Card  
BCT-SXA tapes Betacam SX Tapes  
WRR-810A UHF Synthesized Tuner (64U)  
WRR-810A UHF Synthesized Tuner (66U)  
WRR-810A UHF Synthesized Tuner (68U)  
WRR-810A UHF Synthesized Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (66U)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855B UHF Synthesized Diversity Tuner (1416U)  
WRR-855B UHF Synthesized Diversity Tuner (3032U)  
WRR-855B UHF Synthesized Diversity Tuner (6264U)  
WRR-855B UHF Synthesized Diversity Tuner (6668U)  
WRR-860A UHF Synthesized Diversity Tuner (AU)  
WRR-860A UHF Synthesized Diversity Tuner (68U)  
WRR-860A UHF Synthesized Diversity Tuner (68CA)  
BP-L90A Rechargeable Lithium-ion Battery Pack

BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger  
AC-DN2A AC Adaptor  
AC-DN2B AC Adaptor  
AC-DN10 AC Adaptor/Charger  
AC-550 AC Adaptor  
RM-P9 Remote Control Unit  
CA-701 Camcorder Adaptor  
CA-702 Camcorder Adaptor  
CA-755 Camcorder Adaptor  
LC-DN7 Carrying Case  
BVF-55 5-inch Type B/W Viewfinder (EIA)  
BVF-V20W 2-inch Type B/W Viewfinder (EIA)  
BVF-VC10W 1.35-inch Type Color Viewfinder  
BKW-401 Viewfinder Rotation Bracket  
VCT-14 Tripod Adaptor  
CAC-6 Return Video Selector  
CCXA Cable Audio Cable

\*For mounting WRR-860A or WRR-810A, an adaptor is required.

# Betacam SX Camcorders

## Specifications

### General

Mass:  
4.0 kg (8 lb 13 oz)

Operating mass:  
6.0 kg (13 lb 3 oz)

Power requirements:  
DC 12 V +5.0 V/-1.0 V

Power consumption:  
31.5 W (REC mode)

Operating temperature:  
0 to +40°C (+32 to +104°F)

Storage temperature:  
-20 to +60°C (-4 to +140°F)

Humidity:  
25 to 85% (relative humidity)

Continuous operating time:  
Approx. 110 min (with BP-L60A)  
Approx. 165 min (with BP-L90A)

**Inputs/outputs**

Genlock video input:  
BNC (1), 1.0 Vp-p, 75 Ω

Time code input:  
BNC (1), 0.5 to 18 Vp-p, 10 kΩ

Audio CH-1/2 input/microphone input:  
XLR-3-31 type (2), -60 dBu/+4 dBu selectable,  
high impedance, balanced

Video output:  
BNC (1), 1.0Vp-p, 75Ω, sync negative

Test output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative

Time code output:  
BNC (1), 1.0 Vp-p, 75 Ω

Earphone:  
Mini jack

Audio output:  
XLR 5-pin (male) (stereo)

Lens:  
12-pin

Remote:  
6-pin

Light:  
2-pin, DC12 V, Max. 30 W

DC input:  
XLR 4-pin (male) with switch (for the optional  
AC-550)

DC output:  
4-pin (for wireless microphone receiver), DC 12 V

**VTR section**

Recording format:  
Betacam SX

Tape speed:  
59.515 mm/s (525 mode)

Playback/recording time:  
Max. 62 min (with BCT-62SXA cassette)

Fast forward time:  
Approx. 5.5 min (with BCT-62SXA cassette)

Rewind time:  
Approx. 5 min (with BCT-62SXA cassette)

Recommended tape:  
Sony Betacam SX BCT-62SXA series  
Sony BCT-30MA series  
Sony UVWT-30MA series

Sampling frequency

Y:  
13.5 MHz

R-Y/B-Y:  
6.75 MHz

Quantization:  
8 bits/sample

Error correction:  
Reed-solomon code

Video performance

K-factor (2T pulse):  
1% or less

Y/R-Y/B-Y delay:  
15 ns or less

Digital audio performance

Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
16 bits/sample

Frequency response:  
20 Hz to 20 kHz +0.5 dB/-1.0 dB

Dynamic range (emphasis ON):  
More than 85 dB

Distortion (at 1 kHz, emphasis ON, reference  
level):  
Less than 0.08%

Cross talk (at 1 kHz, reference level):  
Less than -70 dB

Wow and flutter:  
Below measurable limit

Head room:  
20 dB

Emphasis (ON/OFF selectable):  
T1=50 μs , T2=15 μs

### Camera section

Pickup device:  
3-chip 2/3-inch type Power HAD 1000 IT 16:9  
widescreen CCD

Picture elements:  
1038(H) x 504(V)

Optical system:  
F1.4 prism system

Built-in filters:  
1: CLEAR 2: 5600K+1/8ND 3: 5600K 4:  
5600K+1/64ND

Shutter speed:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)

Clear scan:  
CLS: 60.1 to 7000 Hz (260 steps)

Lens mount:  
Special bayonet mount

Sensitivity (2000lx, 89.9% reflective):  
F9

Minimum illumination:  
Approx. 0.35 lx (F1.4 lens, +42 dB Turbo Gain)

S/N ratio (typical):  
63 dB

Vertical resolution:  
(without Super EVS) 400 TV lines  
(with Super EVS) 450 TV lines

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level (without lens)

Warm-up time:  
2 s

Modulation depth at 5 MHz:  
16:9 mode: 70% (typical)  
4:3 mode: 55% (typical)

**Viewfinder**

CRT:  
2-inch type monochrome

Controls:  
BRIGHT control, CONTRAST control, PEAKING  
control, TALLY, ZEBRA, DISPLAY switches

Horizontal resolution  
16:9 mode: 450 TV lines  
4:3 mode: 600 TV lines

Microphone:  
Ultra-directional (detachable)

\*The specifications given above were measured by  
CA-701 camcorder adaptor.

## Betacam SX Camcorders

### DNW-9WSP Betacam SX Camcorder

#### Features

- Superb picture and sound quality of Betacam SX format
- Component digital recording using MPEG-2 4:2:2 P@ML compression algorithm
- Four channels of 16-bit/48 kHz digital audio
- 10-bit/36 MHz full digital signal processing in the camera head section
- 16:9/4:3 switchable operation
- Provides a longer recording time of up to 62 minutes on a single S-cassette
- Current Betacam SP metal tape cassettes can be used for Betacam SX recording (with Betacam SX, the recording time of a Betacam SP tape is doubled)
- Approximately 165 minutes of continuous operation with a BP-L90A lithium-ion battery and 110 minutes with a BP-L60A
- Compact and lightweight, approximately 6 kg including battery, tape and lens
- Uses 2/3-inch type switchable 16:9/4:3 widescreen Power HAD 1000 IT CCDs each with 620K picture elements
- Auto Tracing White balance (ATW) capability
- Turbo Gain function
- Shot Mark and REC Start Mark functions
- Variable speed electronic shutter
- Wide 2-inch(\*) type monochrome viewfinder with horizontal resolution of 600 TV lines in 4:3 mode and 450 TV lines in 16:9 mode
- Color playback in the field without an external adaptor
- Viewfinder playback
- Two-layer menu control system (User and Engineer menus)
- Setup Card system to store setup parameters on removable setup cards
- Slot-in mechanism for optional WRR-855A/855B wireless microphone receiver
- Tally function on viewfinder, front and back of camcorder
- Interface with optional RM-P9 remote control unit

(\*) Viewable area measured diagonally



\*Lens, light, WRR-855A and battery are optional. Lens with 'shrinker' function are recommended for WS models.



#### Supplied Accessories

Shoulder belt (1)  
Microphone (1)  
XLR cap (4)  
Maintenance manual <part 1> (1)  
Operation manual (1)

#### Optional Accessories

WLL-RX50 Wireless Camera Receiver  
WLL-CA50 Wireless Camera Transmitter (CER)  
BSC-1-PACK Setup Card  
BCT-SXA tapes Betacam SX Tapes  
WRR-810A UHF Synthesized Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-860A UHF Synthesized Diversity Tuner (AU)  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack

BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger  
AC-DN2A AC Adaptor  
AC-DN2B AC Adaptor  
AC-DN10 AC Adaptor/Charger  
AC-550CE AC Adaptor  
RM-P9 Remote Control Unit  
CA-701 Camcorder Adaptor  
CA-702P Camcorder Adaptor  
CA-755P Camcorder Adaptor  
LC-DN7 Carrying Case  
BVF-55CE 5-inch Type B/W Viewfinder (CCIR)  
BVF-V10CE 1.5-inch Type B/W Viewfinder (CCIR)  
BVF-V20WCE 2-inch Type B/W Viewfinder (CCIR)  
BVF-VC10W 1.35-inch Type Color Viewfinder  
BKW-401 Viewfinder Rotation Bracket  
VCT-14 Tripod Adaptor  
CAC-6 Return Video Selector

\*For mounting WRR-860A or WRR-810A, an adaptor is required.

Betacam SX Camcorders

Specifications

General

Mass:  
4.0 kg (8 lb 13 oz)

Operating mass:  
6.0 kg (13 lb 3 oz)

Power requirements:  
DC 12 V +5.0 V/-1.0 V

Power consumption:  
31.5 W (REC mode)

Operating temperature:  
0 to +40°C (+32 to +104°F)

Storage temperature:  
-20 to +60°C (-4 to +140°F)

Humidity:  
25 to 85% (relative humidity)

Continuous operating time:  
Approx. 110 min (with BP-L60A)  
Approx. 165 min (with BP-L90A)

**Inputs/outputs**

Genlock video input:  
BNC (1), 1.0 Vp-p, 75 Ω

Time code input:  
BNC (1), 0.5 to 18 Vp-p, 10 kΩ

Audio CH-1/2 input/microphone input:  
XLR-3-31 type (2), -60 dBu/+4 dBu selectable,  
high impedance, balanced

Video output:  
BNC (1), 1.0Vp-p, 75 Ω, sync negative

Test output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative

Time code output:  
BNC (1), 1.0 Vp-p, 75 Ω

Earphone:  
Mini jack

Audio output:  
XLR 5-pin male (stereo)

Lens:  
12-pin

Remote:  
6-pin

Light:  
2-pin, DC12 V, Max. 30 W

DC input:  
XLR 4-pin male with switch (for the optional  
AC-550CE)

DC output:  
4-pin (for wireless microphone receiver), DC 12 V

**VTR section**

Recording format:  
Betacam SX

Tape speed:  
59.575 mm/s (625 mode)

Playback/recording time:  
Max. 62 min (with BCT-62SXA cassette)

Fast forward time:  
Approx. 5.5 min (with BCT-62SXA cassette)

Rewind time:  
Approx. 5 min (with BCT-62SXA cassette)

Recommended tape:  
Sony Betacam SX BCT-62SXA series  
Sony BCT-30MA series  
Sony UVWT-30MA series

Sampling frequency

Y:  
13.5 MHz

R-Y/B-Y:  
6.75 MHz

Quantization:  
8 bits/sample

Error correction:  
Reed-solomon code

Video performance

K-factor (2T pulse):  
1% or less

Y/R-Y/B-Y delay:  
15 ns or less

Digital audio performance

Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
16 bits/sample

Frequency response:  
20 Hz to 20 kHz +0.5 dB/-1.0 dB

Dynamic range (emphasis ON):  
More than 85 dB

Distortion (at 1 kHz, emphasis ON, reference  
level):  
Less than 0.08%

Cross talk (at 1 kHz, reference level):  
Less than -70 dB

Wow and flutter:  
Below measurable limit

Head room:  
20 dB

Emphasis (ON/OFF selectable):  
T1=50 μs , T2=15 μs

Camera section

Pickup device:  
3-chip 2/3-inch type Power HAD 1000 IT 16:9  
widescreen CCD

Picture elements:  
1038(H) x 594(V)

Optical system:  
F1.4 prism system

Built-in filters:  
1: CLEAR 2: 5600K+1/8ND 3: 5600K 4:  
5600K+1/64ND

Shutter speed:  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)

Clear scan:  
CLS: 50.2 to 9000 Hz (310 steps)

Lens mount:  
Special bayonet mount

Sensitivity (2000lx, 89.9% reflective):  
F9

Minimum illumination:  
0.35 lx (F1.4 lens, +42 dB Turbo Gain)

S/N ratio (typical):  
63 dB

Vertical resolution:  
(without Super EVS) 480 TV lines  
(with Super EVS) 530 TV lines

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level (without lens)

Warm-up time:  
2 s

Modulation depth at 5 MHz:  
16:9 mode: 70% (typical)  
4:3 mode: 55% (typical)

**Viewfinder**

CRT:  
2-inch type monochrome

Controls:  
BRIGHT control, CONTRAST control, PEAKING  
control, TALLY, ZEBRA, DISPLAY switches

Horizontal resolution:  
16:9 MODE: 450 TV lines 4:3 MODE: 600 TV  
lines

Microphone:  
Ultra-directional (detachable)

\*The specifications above were measured by CA-701  
camcorder adaptor.

## Betacam SX Camcorders

### DNW-90WS Betacam SX Camcorder

#### Features

- Superb picture and sound quality of Betacam SX format
- Component digital recording using MPEG-2 4:2:2P@ML compression algorithm
- Four channels of 16-bit/48 kHz digital audio
- 10-bit/36 MHz full digital signal processing in camera head section
- 16:9/4:3 switchable operation
- Provides a longer recording time of up to 62 minutes on a single S-cassette
- Approximately 160 minutes of continuous operation with a BP-L90A lithium-ion battery and 105 minutes with a BP-L60A
- Compact and lightweight, approximately 6 kg including battery, tape and lens
- Uses 2/3-inch type switchable 16:9/4:3 widescreen Power HAD 1000 FIT CCDs each with 520K picture elements
- Auto Tracing White Balance (ATW) capability
- Turbo Gain function
- Shot Mark and REC. Start Mark functions
- Variable speed electronic shutter
- Wide 2-inch(\*) type monochrome viewfinder with horizontal resolution of 600 TV lines in 4:3 mode and 450 TV lines in 16:9 mode
- Color playback in the field without an external adaptor
- Viewfinder playback
- Two-layer menu control system (User Menus and Engineer menus)
- Setup Card system to store setup parameters on removable setup cards
- Slot-in mechanism for optional WRR-855A/855B wireless microphone receiver
- Tally indication on viewfinder, front and back of camcorder
- Interface with optional RM-P9 remote control unit

(\*) Viewable area measured diagonally

#### Supplied Accessories

- Shoulder belt (1)
- Microphone (1)
- XLR cap (4)
- Maintenance manual <part 1> (1)
- Operation manual (1)

#### Optional Accessories

- WLL-RX50 Wireless Camera Receiver
- WLL-CA50 Wireless Camera Transmitter (UC)
- BSC-1-PACK Setup Card
- BCT-SXA tapes Betacam SX Tapes
- WRR-810A UHF Synthesized Tuner (64U)
- WRR-810A UHF Synthesized Tuner (66U)
- WRR-810A UHF Synthesized Tuner (68U)
- WRR-810A UHF Synthesized Tuner (AU)
- WRR-855A UHF Synthesized Diversity Tuner (64U)
- WRR-855A UHF Synthesized Diversity Tuner (66U)
- WRR-855A UHF Synthesized Diversity Tuner (68U)
- WRR-855A UHF Synthesized Diversity Tuner (AU)
- WRR-855A UHF Synthesized Diversity Tuner (KR)
- WRR-855B UHF Synthesized Diversity Tuner (1416U)
- WRR-855B UHF Synthesized Diversity Tuner (3032U)
- WRR-855B UHF Synthesized Diversity Tuner (6264U)
- WRR-855B UHF Synthesized Diversity Tuner (6668U)
- WRR-860A UHF Synthesized Diversity Tuner (AU)
- WRR-860A UHF Synthesized Diversity Tuner (68U)
- WRR-860A UHF Synthesized Diversity Tuner (68CA)

- BP-L90A Rechargeable Lithium-ion Battery Pack
- BP-L60A Rechargeable Lithium-ion Battery Pack
- BP-M100 Rechargeable Nickel Metal Hydride Battery Pack
- BP-M50 Rechargeable Nickel Metal Hydride Battery Pack
- BP-IL75 Rechargeable Lithium-ion Battery Pack
- BP-GL65 Rechargeable Lithium-ion Battery Pack
- BP-GL95 Rechargeable Lithium-ion Battery Pack
- BC-M50 Ni-MH & Li-ion Battery Charger
- BC-M150 Ni-MH & Li-ion Battery Charger
- BC-L70 Li-ion Battery Charger
- AC-DN2A AC Adaptor
- AC-DN2B AC Adaptor
- AC-DN10 AC Adaptor/Charger
- AC-550 AC Adaptor
- RM-P9 Remote Control Unit
- CA-701 Camcorder Adaptor
- CA-702 Camcorder Adaptor
- CA-755 Camcorder Adaptor
- LC-DN7 Carrying Case
- BVF-55 5-inch Type B/W Viewfinder (EIA)
- BVF-V10 1.5-inch Type B/W Viewfinder (EIA)
- BVF-V20W 2-inch Type B/W Viewfinder (EIA)
- BVF-VC10W 1.35-inch Type Color Viewfinder
- BKW-401 Viewfinder Rotation Bracket
- VCT-14 Tripod Adaptor
- CAC-6 Return Video Selector
- CCXA Cable Audio Cable

\*For mounting WRR-860A or WRR-810A, an adaptor is required.



\*Lens, light, WRR-855A and battery are optional. Lens with 'shrinker' function are recommended for WS models.



Betacam SX Camcorders

Specifications

General

Mass:  
4.0 kg (8 lb 13 oz)  
Operating mass:  
6.0 kg (13 lb 3 oz)  
Power requirements:  
DC 12 V +5.0 V/-1.0 V  
Power consumption:  
32 W (REC mode)  
Operating temperature:  
0 to +40°C (+32 to +104°F)  
Storage temperature:  
-20 to +60°C (-4 to +140°F)  
Humidity:  
25 to 85% (relative humidity)  
Continuous operating time:  
Approx. 105 min (with BP-L60A)  
Approx. 160 min (with BP-L90A)

Inputs/outputs

Genlock video input:  
BNC (1), 1.0 Vp-p, 75 Ω  
Time code input:  
BNC (1), 0.5 to 18 Vp-p, 10 kΩ  
Audio CH-1/2 input/microphone input:  
XLR-3-31 type (2), -60 dBu/+4 dBu selectable,  
high impedance, balanced  
Video output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative  
Test output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative  
Time code output:  
BNC (1), 1.0 Vp-p, 75 Ω  
Earphone:  
Mini jack  
Audio output:  
XLR 5-pin male (stereo)  
Lens:  
12-pin  
Remote:  
6-pin  
Light:  
2-pin, DC 12 V, Max. 30 W  
DC input:  
XLR 4-pin male with switch (for the optional  
AC-550)  
DC output:  
4-pin (for wireless microphone receiver), DC 12 V

VTR section

Recording format:  
Betacam SX  
Tape speed:  
59.515 mm/s (525 mode)  
Playback/Recording time:  
Max. 62 min. (with BCT-62SXA cassette)  
Fast forward time:  
Approx. 5.5 min. (with BCT-62SXA cassette)  
Rewind time:  
Approx. 5 min. (with BCT-62SXA cassette)  
Recommended tape:  
Sony Betacam SX BCT-62SXA series  
Sony BCT-30MA series  
Sony UVWT-30MA series  
Sampling frequency  
Y:  
13.5 MHz  
R-Y/B-Y:  
6.75 MHz  
Quantization:  
8 bits/sample  
Error correction:  
Reed-solomon code  
Video performance  
K-factor (2T pulse):  
1% or less  
Y/R-Y/B-Y delay:  
15 ns or less

Digital audio performance  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
16 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5 dB/-1.0 dB  
Dynamic range (emphasis ON):  
More than 85 dB  
Distortion (at 1 kHz, emphasis ON, reference  
level):  
Less than 0.08%  
Cross talk (at 1 kHz, reference level):  
Less than -70 dB  
Wow and flutter:  
Below measurable limit  
Head room:  
20 dB  
Emphasis (ON/OFF selectable):  
T1=50 μs , T2=15 μs

Camera section

Pickup device:  
3-chip 2/3-inch type Power HAD 1000 FIT 16:9  
widescreen CCD  
Picture elements:  
1038(H) x 504(V)  
Optical system:  
F1.4 prism system  
Built-in filters:  
1: CLEAR 2: 5600K+1/8ND 3: 5600K 4:  
5600K+1/64ND  
Shutter speed:  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)  
Clear scan:  
CLS: 60.1 to 7000 Hz (260 steps)  
ECS: 30.4 to 58.3 Hz (248 steps)  
Lens mount:  
Special bayonet mount  
Sensitivity (2000lx, 89.9% reflective):  
F9  
Minimum illumination:  
Approx. 0.35 lx (F1.4 lens, +42dB Turbo Gain)  
S/N ratio (typical):  
63 dB  
Vertical resolution:  
(without Super EVS) 400 TV lines  
(with Super EVS) 450 TV lines  
Registration:  
0.05% (all zones, without lens)  
Geometric distortion:  
Below measurable level (without lens)  
Warm-up time:  
2 s  
Modulation depth at 5 MHz  
16:9 mode:  
70% (typical)  
4:3 mode:  
55% (typical)

Viewfinder

CRT:  
2-inch type monochrome  
Controls:  
BRIGHT control, CONTRAST control, PEAKING  
control, TALLY, ZEBRA, DISPLAY switches  
Horizontal resolution:  
16:9 mode:  
450 TV lines  
4:3 mode:  
600 TV lines  
Microphone:  
Ultra-directional (detachable)

\*The specification given above were measured by  
CA-701 camcorder adaptor.

## Betacam SX Camcorders

### DNW-90WSP Betacam SX Camcorder

#### Features

- Superb picture and sound quality of Betacam SX format
- Component digital recording using MPEG-2 4:2:2P@ML compression algorithm
- Four channels of 16-bit/48 kHz digital audio
- 10-bit/36 MHz full digital signal processing in camera head section
- 16:9/4:3 switchable operation
- Provides a longer recording time of up to 62 minutes on a single S-cassette
- Approximately 160 minutes of continuous operation with a BP-L90A lithium-ion battery and 105 minutes with a BP-L60A
- Compact and lightweight, approximately 6 kg including battery, tape and lens
- Uses 2/3-inch type switchable 16:9/4:3 widescreen Power HAD 1000 FIT CCDs each with 620K picture elements
- Auto Tracing White balance (ATW) capability
- Turbo Gain function
- Shot Mark and REC. Start Mark functions
- Variable speed electronic shutter
- Wide 2-inch(\*) type monochrome viewfinder with horizontal resolution of 600 TV lines in 4:3 mode and 450 TV lines in 16:9 mode
- Color playback in the field without an external adaptor
- Viewfinder playback
- Two-layer menu control system (User and Engineer menus)
- Setup Card system to store setup parameters on removable setup cards
- Slot-in mechanism for optional WRR-855A/855B wireless microphone receiver
- Tally indication on viewfinder, front and back of camcorder
- Interface with optional RM-P9 remote control unit

(\*) Viewable area measured diagonally

#### Supplied Accessories

Shoulder belt (1)  
Microphone (1)  
XLR cap (4)  
Maintenance manual <part 1> (1)  
Operation manual (1)

#### Optional Accessories

WLL-RX50 Wireless Camera Receiver  
WLL-CA50 Wireless Camera Transmitter (CER)  
BSC-1-PACK Setup Card  
BCT-SXA tapes Betacam SX Tapes  
WRR-810A UHF Synthesized Tuner (AU)  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
WRR-855B UHF Synthesized Diversity Tuner (21CE7)  
WRR-855B UHF Synthesized Diversity Tuner (33CE7)  
WRR-855B UHF Synthesized Diversity Tuner (62CE7)  
WRR-855B UHF Synthesized Diversity Tuner (67CE7)  
WRR-860A UHF Synthesized Diversity Tuner (AU)  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack

BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger  
AC-DN2A AC Adaptor  
AC-DN2B AC Adaptor  
AC-DN10 AC Adaptor/Charger  
AC-550CE AC Adaptor  
RM-P9 Remote Control Unit  
CA-701 Camcorder Adaptor  
CA-702P Camcorder Adaptor  
CA-755P Camcorder Adaptor  
LC-DN7 Carrying Case  
BVF-55CE 5-inch Type B/W Viewfinder (CCIR)  
BVF-V10CE 1.5-inch Type B/W Viewfinder (CCIR)  
BVF-V20WCE 2-inch Type B/W Viewfinder (CCIR)  
BVF-VC10W 1.35-inch Type Color Viewfinder  
BKW-401 Viewfinder Rotation Bracket  
VCT-14 Tripod Adaptor  
CAC-6 Return Video Selector  
CCXA Cable Audio Cable

\*For mounting WRR-860A or WRR-810A, an adaptor is required.



\*Lens, light, WRR-855A and battery are optional. Lens with 'shrinker' function are recommended for WS models.



Betacam SX Camcorders

Specifications

General

Mass:  
4.0 kg (8 lb 13 oz)

Operating mass:  
6.0 kg (13 lb 3 oz)

Power requirements:  
DC 12 V +5.0 V/-1.0 V

Power consumption:  
32 W (REC mode)

Operating temperature:  
0 to +40°C (+32 to +104°F)

Storage temperature:  
-20 to +60°C (-4 to +140°F)

Humidity:  
25 to 85% (relative humidity)

Continuous operating time:  
Approx. 105 min. (with BP-L60A)  
Approx. 160 min. (with BP-L90A)

**Inputs/outputs**

Genlock video input:  
BNC (1), 1.0 Vp-p, 75 Ω

Time code input:  
BNC (1), 0.5 to 18 Vp-p, 10 kΩ

Audio CH-1/2 input/microphone input:  
XLR-3-31 type (2), -60 dBu/+4 dBu selectable,  
high impedance, balanced

Video output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative

Test output:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative

Time code output:  
BNC (1), 1.0 Vp-p, 75 Ω

Earphone:  
Mini jack

Audio output:  
XLR 5-pin (male) (stereo)

Lens:  
12-pin

Remote:  
6-pin

Light:  
2-pin, DC 12 V, max. 30 W

DC input:  
XLR 4-pin (male) with switch (for the optional  
AC-550CE)

DC output:  
4-pin (for wireless microphone receiver), DC 12 V

VTR section

Recording format:  
Betacam SX

Tape speed:  
59.575 mm/s (625 mode)

Playback/Recording time:  
Max. 62 min (with BCT-62SXA cassette)

Fast forward time:  
Approx. 5.5 min (with BCT-62SXA cassette)

Rewind time:  
Approx. 5 min. (with BCT-62SXA cassette)

Recommended tape:  
Sony Betacam SX BCT-62SXA series  
Sony BCT-30MA series  
Sony UVWT-30MA series

Sampling frequency  
Y:  
13.5 MHz  
R-Y/B-Y:  
6.75 MHz

Quantization:  
8 bits/sample

Error correction:  
Reed-solomon code

Video performance  
K-factor (2T pulse):  
1% or less

Y/R-Y/B-Y delay:  
15 ns or less

Digital audio performance  
Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
16 bits/sample

Frequency response:  
20 Hz to 20 kHz +0.5 dB/-1.0 dB

Dynamic range (emphasis ON):  
More than 85 dB

Distortion (at 1 kHz, emphasis ON, reference  
level):  
Less than 0.08%

Cross talk (at 1kHz, reference level):  
Less than -70 dB

Wow and flutter:  
Below measurable limit

Head room:  
20 dB

Emphasis (ON/OFF selectable):  
T1=50 μs , T2=15 μs

Camera section

Pickup device:  
3-chip 2/3-inch type Power HAD 1000 FIT 16:9  
widescreen CCD

Picture elements:  
1038(H) x 594(V)

Optical system:  
F1.4 prism system

Built-in filters:  
1: CLEAR 2: 5600K+1/8ND 3: 5600K 4:  
5600K+1/64ND

Shutter speed:  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)

Clear scan  
CLS: 50.2 to 9000 Hz (310 steps)  
ECS: 25.4 to 48.7 Hz (295 steps)

Lens mount:  
Special bayonet mount

Sensitivity (2000lx, 89.9% reflective):  
F9

Minimum illumination:  
0.35 lx (F1.4 lens, +42dB Turbo Gain)

S/N ratio (typical):  
61 dB

Vertical resolution:  
(without Super EVS) 480 TV lines  
(with Super EVS) 530 TV lines

Registration:  
0.05% (all zones, without lens)

Geometric distortion:  
Below measurable level (without lens)

Warm-up time:  
2 s

Modulation depth at 5 MHz:  
16:9 mode: 70% (Typical)  
4:3 mode: 55% (Typical)

**Viewfinder**

CRT:  
2-inch type monochrome

Controls:  
BRIGHT control, CONTRAST control, PEAKING  
control, TALLY, ZEBRA, DISPLAY switches

Horizontal resolution:  
16:9 mode: 450 TV lines  
4:3 mode: 600 TV lines

Microphone:  
Ultra-directional (detachable)

\*The specification given above were measured by  
CA-701 camcorder adaptor.

Betacam SX Camcorders



Betacam SX Camcorders

DVCAM Camcorders

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DVCAM Camcorders

## DVCAM Camcorders

### DSR-250 DVCAM Camcorder

#### Features

- Compact and lightweight: 4.4 kg (9 lb 11 oz)
- Newly developed 1/3-inch type CCDs for accurate color reproduction
- Capable of both interlace scan, for moving images, and progressive scan, for still images or shooting a moving subject\*1 and exporting a frame of the image as a still picture
- DSP (Digital Signal Processing)
- 2.5-inch (200,000 dot) color LCD monitor
- 12x lens\*2 with Super SteadyShot system
- New, high-resolution 1.5-inch black & white viewfinder
- 16:9 recording mode available (electronically processed)
- Recording and playback capability with standard and mini-size DVCAM and DV tapes (SP mode only)
- Three XLR audio input connectors for professional microphones (one at front, two at rear)
- Audio dubbing capability (48 kHz/16-bit or 32 kHz/12-bit selectable)
- Long recording time: 184 minutes with a standard-size cassette in DVCAM mode, or 270 minutes in DV SP mode
- Time/date data superimposition on output pictures
- Digital still camera functions with Memory Stick
- Light output (DC 12 V, max. 30 W) and additional DC 12 V out for optional accessories
- Time code preset capability
- i.LINK (DV) interface
- LANC interface for simple editing with a LANC-equipped recorder or editing system
- Supplied RMT-811 Remote Commander



\*1 When recording moving images in progressive scan mode, the motion will display some jitter since the picture is read/output every 1/15 second. \*2 Digital zoom of 24x or 48x available via menu selection.

#### Supplied Accessories

DXF-801 Electronic Viewfinder (1)  
 ECM-NV1 Monaural Microphone (1)  
 RMT-811 Remote Commander and R6 Batteries (2)  
 MSA-4A IC Recording Media Memory Stick (1)  
 MSAC-US1 Memory Stick Reader/Writer(USB terminal adaptor for Memory Stick. Driver software included) (1)  
 Picture Gear 4.1 Lite (1)  
 Lens Hood (1)  
 Lite Hood Cap (1)

#### Optional Accessories

CAC-12 Camera Microphone Holder  
 VCT-U14 Tripod Adaptor  
 BP-L40A Rechargeable Lithium-ion Battery Pack  
 BP-L60A Rechargeable Lithium-ion Battery Pack  
 BP-L90A Rechargeable Lithium-ion Battery Pack  
 NP-1B Rechargeable battery pack  
 BC-L50 Lithium-ion Battery Charger  
 BC-L120 Lithium-ion Battery Charger  
 AC-DN2B AC Adaptor  
 VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
 VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)  
 CCF-L Cables DV Cables (6-pin to 6-pin)  
 CCFD-L Cables DV Cables (6-pin to 4-pin)  
 VCL-HG0758 Wide Conversion Lens  
 VCL-HG1758 Tele Conversion Lens  
 VF-58PK Filter Kit  
 ECM-672 Electret Condenser Microphone (U)  
 ECM-670 Electret Condenser Microphone (U)  
 MSA-A "Memory Stick" IC Memory Media  
 MSAC-FD Floppy Disc Adaptor for Memory Stick  
 MSAC-US Memory Stick Reader/Writer

DVCAM Camcorders

Specifications

General

Power requirements:  
DC 12 V (11 to 17 V)  
Power consumption:  
10.5 W using the viewfinder  
12.1 W using the viewfinder and LCD monitor  
Operating temperature:  
0 to 40 °C (32 to 104 °F)  
Storage temperature:  
-20 to 60 °C (-4 to 140 °F)  
Dimensions (W x H x D):  
241.7 x 251.2 x 508.8 mm (9 5/8 x 10 x 20 1/8 inches) including microphone  
Mass (camcorder only):  
Approx. 4.4 kg (9 lb 11 oz)

Camera part

Lens:  
12:1 Variable Speed (1.2-22 sec) zoom lens  
F =6.0 to 72.0 mm; F1.6 to 2.4; Filter Diameter 58mm  
Focus:  
Auto/Manual (ring)/Infinity/One push auto  
Imaging device:  
Three 1/3-inch type CCDs, 380,000 pixels  
Progressive/Interlace Scan  
White balance:  
Auto/One-push(Memory A/Memory B)/Outdoor (5800 K)/Indoor (3200 K)  
Shutter speed:  
1/4, 1/8, 1/15, 1/30, 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500,1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000,1/10000 (s)  
Exposure:  
Auto/Manual  
Minimum illumination:  
2 lx  
Horizontal resolution:  
530 TV lines  
Viewfinder:  
1.5-inch type Black & White CRT, Zebra Pattern (DXF-801)

VTR part

Tape speed:  
Approx. 28.2 mm/s (DVCAM mode)  
Approx. 18.8 mm/s (DV SP mode)  
Maximum recording time:  
184 minutes (DVCAM mode), 270 minutes (DV SP mode) with PDV-184ME cassette  
40 minutes (DVCAM mode), 60 minutes (DV SP mode) with PDVM-40ME cassette  
Video signal:  
EIA Standard, NTSC color system  
Audio signal  
Rec: 48 kHz/16-bit, 32 kHz/12-bit  
Playback: 48 kHz/16-bit, 32 kHz/12-bit, 32 kHz/16-bit, 44.1 kHz/16-bit  
Built-in speaker:  
Dynamic Speaker  
LCD:  
TFT Active Matrix, 2.5-inch, 200,640 dots (880 x 228)

Connectors

Video IN/OUT:  
RCA pin: ( 1), Luminance signal: 1Vp-p, 75 Ω, unbalanced, sync negative  
Monitor OUT:  
BNC: (1), Luminance signal: 1 Vp-p, 75 Ω, unbalanced, sync negative

Audio IN/OUT:  
RCA pin :( 2), 245 mV, Output impedance with less than 2.2 k  
Input impedance with more than 47 k  
S-Video IN/OUT:  
Mini-DIN 4-pin: ( 1), Luminance signal: 1 Vp-p, 75 Ω, unbalanced  
Chrominance signal: 0.286 Vp-p  
Audio IN:  
XLR 3-pin (female):( 3) , -60 dBu 6.8 k, +4 dBu 6.8 k (0 dBu = 0.775 V rms)  
DV IN/OUT:  
6-pin (with lock): (1)  
LANC:  
Stereo minimini jack (2.5 mm) : (1)  
Headphone:  
Stereo mini jack (3.5 mm): (1)  
External DC IN:  
12 V, XLR 4-pin (male): (1)  
DC OUT for Light  
12 V, max. 30 W  
DC OUT  
12 V, 4 pin: (1)

## DVCAM Camcorders

### DSR-250P DVCAM Camcorder

#### Features

- Compact and lightweight: 4.4 kg (9 lb 11 oz)
- Newly developed 1/3-inch type CCDs for accurate color reproduction
- Capable of both interlace scan, for moving images, and progressive scan, for still images or shooting a moving subject\*1 and exporting a frame of the image as a still picture
- DSP (Digital Signal Processing)
- 2.5-inch (200,000 dot) color LCD monitor
- 12x lens\*2 with Super SteadyShot™ system
- New, high-resolution 1.5-inch black & white viewfinder
- 16:9 recording mode available (electronically processed)
- Recording and playback capability with standard and mini-size DVCAM and DV tapes (SP mode only)
- Three XLR audio input connectors for professional microphones (one at front, two at rear)
- Audio dubbing capability (48 kHz/16-bit or 32 kHz/12-bit selectable)
- Long recording time: 184 minutes with a standard-size cassette in DVCAM mode, or 270 minutes in DV SP mode
- Time/date data superimposition on output pictures
- Digital still camera functions with Memory Stick
- Light output (DC 12 V, max. 30 W) and additional DC 12 V out for optional accessories
- Time code preset capability
- i.LINK (DV) interface
- LANC interface for simple editing with a LANC-equipped recorder or editing system
- Supplied RMT-811 Remote Commander



\*1 When recording moving images in progressive scan mode, the motion will display some jitter since the picture is read/output every 1/12.5 second. \*2 Digital zoom of 24x or 48x available via menu selection.

#### Supplied Accessories

DXF-801 Electronic Viewfinder (1)  
 ECM-NV1 Monaural Microphone (1)  
 RMT-811 Remote Commander and R6 Batteries (2)  
 MSA-4A IC Recording Media Memory Stick (1)  
 MSAC-US1 Memory Stick Reader/Writer(USB terminal adaptor for Memory Stick. Driver software included) (1)  
 Picture Gear 4.1 Lite (1)  
 Lens Hood (1)  
 Lite Hood Cap (1)

#### Optional Accessories

CAC-12 Camera Microphone Holder  
 VCT-U14 Tripod Adaptor  
 BP-L40A Rechargeable Lithium-ion Battery Pack  
 BP-L60A Rechargeable Lithium-ion Battery Pack  
 BP-L90A Rechargeable Lithium-ion Battery Pack  
 NP-1B Rechargeable battery pack  
 BC-L50 Lithium-ion Battery Charger  
 BC-L120 Lithium-ion Battery Charger  
 AC-DN2B AC Adaptor  
 VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
 VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)  
 CCF-L Cables DV Cables (6-pin to 6-pin)  
 CCFD-L Cables DV Cables (6-pin to 4-pin)  
 VCL-HG0758 Wide Conversion Lens  
 VCL-HG1758 Tele Conversion Lens  
 ECM-670 Electret Condenser Microphone  
 ECM-670 Electret Condenser Microphone (E)  
 ECM-672 Electret Condenser Microphone  
 ECM-672 Electret Condenser Microphone (E)  
 MSA-A "Memory Stick" IC Memory Media  
 MSAC-FD Floppy Disc Adaptor for Memory Stick  
 MSAC-US Memory Stick Reader/Writer

DVCAM Camcorders

Specifications

GENERAL

Power requirements:

DC 12 V (11 to 17 V)

Power consumption:

10.5 W using the viewfinder

12.1 W using the viewfinder and LCD monitor

Operating temperature:

0 to 40 °C (32 to 104 °F)

Storage temperature:

-20 to 60 °C (-4 to 140 °F)

Dimensions (W x H x D):

241.7 x 251.2 x 508.8 mm (9 5/8 x 10 x 20 1/8 inches) including microphone

Mass (camcorder only):

Approx. 4.4 kg (9 lb 11 oz)

CAMERA PARTS

Lens:

12:1 Variable Speed (1.2-22 s) zoom lens

F =6.0 to 72.0 mm; F1.6 to 2.4; Filter

Diameter 58mm

Focus:

Auto/Manual (ring)/Infinity/One push auto

Imaging device:

Three 1/3-inch type CCDs, 450,000 pixels, Progressive/Interlace Scan

White balance:

Auto/One-push(Memory A/Memory B)/Outdoor (5800 K)/Indoor (3200 K)

Shutter speed:

1/3, 1/6, 1/12, 1/25, 1/50, 1/60, 1/100,

1/120, 1/150,

1/215, 1/300, 1/425,1/600, 1/1000, 1/1250,

1/1750,

1/2500, 1/3500, 1/6000,1/10000 second

Exposure:

Auto/Manual

Minimum illumination:

2 lx

Horizontal resolution:

530 TV lines

Viewfinder:

1.5-inch type Black & White CRT, Zebra Pattern (DXF-801)

VTR PARTS

Audio signal

Rec: 48 kHz/16-bit, 32 kHz/12-bit

Playback: 48 kHz/16-bit, 32 kHz/12-bit, 32 kHz/16-bit, 44.1 kHz/16-bit

Built-in speaker:

Dynamic Speaker

LCD:

TFT Active Matrix, 2.5-inch, 200,640 dots (880 x 228)

Tape speed:

Approx. 28.2 mm/s (DVCAM mode)

Approx. 18.8 mm/s (DV SP mode)

Maximum recording time:

184 minutes (DVCAM mode), 270 minutes (DV SP mode) with PDV-184ME cassette

40 minutes (DVCAM mode), 60 minutes (DV SP mode) with PDVM-40ME cassette

Video signal:

CCIR Standard, PAL color system

Connectors

Video IN/OUT:

RCA pin: (1)

Luminance signal: 1 Vp-p, 75 Ω, unbalanced, sync negative

Monitor OUT:

BNC pin: (1)

Luminance signal: 1 Vp-p, 75 Ω, unbalanced, sync negative

Audio IN/OUT

RCA pin: (2)

245 mV, Output impedance with less than 2.2 k, Input impedance with more than 47 k

S-Video IN/OUT:

Mini-DIN 4 pin: (1)

Luminance signal: 1 Vp-p, 75 Ω, unbalanced, Chrominance signal: 0.3 Vp-p (PAL)

Audio IN:

XLR 3-pin (female) x 3, -60 dBu 6.8 k, +4 dBu 6.8 k (0 dBu = 0.775 V rms)

DV IN/OUT:

6-pin (with lock): (1)

LANC:

Stereo minimini jack (2.5 mm) : (1)

Headphone:

Stereo mini jack (3.5 mm): (1)

External DC IN:

12 V, XLR 4-pin (male): (1)

DC OUT for Light:

12 V, max. 30 W: (1)

DC OUT:

12 V, 4 pin: (1)

## DVCAM Camcorders

### DSR-400K DVCAM Camcorder

The DSR-400K is a DVCAM camcorder that adopts three 2/3-inch type Power HAD EX CCDs with a 4:3 aspect ratio, ideal for applications ranging from video journalism and event videography to newsgathering and independent movie-making. The DSR-400K includes a VCL-917BY Zoom Lens.

#### Features

- 2/3-inch type Power HAD EX CCD ●12-bit A/D conversion ●Advanced digital signal processing (ADSP)
- DVCAM/DV selectable recording ●Long recording time: up to 276 minutes at DV (SP) mode and up to 184 minutes at DVCAM mode with a standard-size cassette
- High-Quality audio recordings ●Digital output to external devices via an i.LINK interface ●Quick FF/REW capabilities ●Rugged and ergonomic design ●Compact and lightweight: approximately 6.5 kg (14 lb 5 oz) including the DXF-801 viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette and VCL-917BY lens (supplied with the DSR-400K package)
- Low power consumption of approximately 17 W (with the DC 12 V power supply, REC mode, viewfinder and LCD monitor off)
- User-friendly menu controls ●Optical ND filter and electric CC filter ●Battery-remaining display on the viewfinder and LCD monitor ●Intelligent light system
- Supplied DXF-801 viewfinder ●User assignable function-buttons ●Turbo gain: max 36 dB ●Optional camera adaptor for wireless microphone receiver
- Memory stick system stores camera setup parameters
- Adjustable shoulder pad ●TruEye processor ●Adaptive highlight control ●Triple skin tone detail control
- Electronic soft focus ●2.5-inch (\*1) type color LCD monitor ●Variable black gamma range ●Auto Tracing White balance (ATW) ●Multi-matrix function ●Color temperature control ●Interval recording

\* Viewable area measured diagonally.



#### Supplied Accessories

VCL-917BY Zoom Lens (1)  
DXF-801 Viewfinder with microphone holder (1)  
VCT-U14 Tripod Adaptor (1)  
External microphone (1)  
Shoulder strap (1)

#### Optional Accessories

CA-WR855 Camera Adaptor  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (66U)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
ECM-670 Electret Condenser Microphone (U)  
ECM-670 Electret Condenser Microphone (E)  
ECM-672 Electret Condenser Microphone (U)  
ECM-672 Electret Condenser Microphone (E)  
DXF-51 5-inch Monochrome Viewfinder  
BP-GL95 Rechargeable Lithium-ion Battery Pack

BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
LC-DS300SFT Soft Carrying Case  
LCR-1 Camera Rain Cover  
CCFD-L Cables DV Cables (6-pin to 4-pin)  
CCF-L Cables DV Cables (6-pin to 6-pin)

#### Optional Boards

CBK-SC01 Analog Composite Input Board  
CBK-SD01 SDI Output Board

DVCAM Camcorders

Specifications

GENERAL

Power requirements  
DC 12 V (11 to 17V)  
Power consumption  
Approx. 17 W (with DC 12 V power supply, REC mode, viewfinder off, LCD monitor off)  
Operating temperature  
0 to +40 °C (+32 to +104 °F)  
Storage temperature  
-20 to +60 °C (-4 to +140 °F)  
Operating humidity  
25 to 85%  
Mass  
Approx. 6.5 kg (14 lb 5 oz) (with viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette, VCL-917BY lens)  
Continuous operating time  
Approx. 300 min. with BP-GL95 battery, REC mode

SIGNAL INPUTS/OUTPUTS

Video inputs  
Genlock video  
BNC, 1.0 Vp-p, 75 Ω  
Audio input (CH-1/2)  
XLR-3 (2), female, -60 dBu/+4 dBu, 10 kΩ, balanced  
Microphone input  
XLR-3, female, -60 dBu  
Time code input  
BNC, 0.5 to 18 Vp-p, 10 kΩ  
Video outputs  
i.LINK  
i.LINK, 6-pin IEEE 1394-based  
Analog composite  
BNC, 1.0 Vp-p, 75 Ω  
Audio output (CH-1/2)  
Pin-jacks (2), -10dBu, 47 kΩ  
Time code output  
BNC, 1.0 Vp-p, 75 Ω  
Monitor output  
BNC, 1.0 Vp-p, 75 Ω  
Earphone output  
Mini-jack

OTHER INPUTS/OUTPUTS

Lens  
12-pin  
VF  
20-pin  
Wireless microphone  
7-pin  
Light  
2-pin, DC 12 V, max. 50 W  
DC input  
XLR-4-pin, male, DC 11 to 17 V  
DC output  
4-pin (for wireless microphone receiver), DC 12 V (max. 0.2 A)  
Battery terminal  
5-pin

CAMERA PERFORMANCE

Pickup device  
3-chip 2/3-inch type Power HAD EX CCD  
Aspect ratio  
4:3  
Total picture elements (H x V)  
1038 x 1008  
Effective picture elements (H x V)  
980 x 988

Optical system  
Spectral system  
F1.4 prism (with quartz filter)  
Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
Lens mount  
2/3-inch type Sony bayonet mount  
Electrical characteristics  
Signal system  
NTSC color system  
Scan format  
525/59.94i  
Sync system  
Internal and External with the VBS or BS signal  
A/D conversion  
12 bits  
Sensitivity  
F11 (typical) (2000 lx, 89.9% reflectance)  
Minimum illumination  
0.5 lx (F1.4 lens, +36 dB gain, shutter off)  
Smear level  
-140 dB (typical)  
Video S/N ratio  
65 dB (typical)  
Horizontal resolution  
920 TV lines  
Vertical resolution  
450 TV lines (with EVS) and 400 TV lines (without EVS)  
Shutter speed  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s  
ECS  
60 to 6000 Hz  
Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36 dB (for GAIN LOW, GAIN MID, GAIN HIGH and GAIN TURBO positions)

VIDEO PERFORMANCE

Recording format  
Video  
DVCAM/DV (SP) (25 Mb/s)  
Audio  
2 ch/16-bit/48 kHz, 2 ch/12-bit/32 kHz  
Record/playback time  
DVCAM: 184 min (with the PDV-184ME), DV SP: 276 min (with the PDV-184ME)  
Fast forward time  
Approx. 45 s (with the PDVM-40ME), approx. 2 min 30 s (with the PDV-184ME)  
Rewind time  
Approx. 45 s (with the PDVM-40ME), approx. 2 min 30 s (with the PDV-184ME)  
Recommended recording media

PDV-184ME/124ME/94ME/64ME/34ME/184N/124N/94N/64N/34N,  
PDVM-184ME/124ME/94ME/64ME/34ME/184N/124N/94N/64N/34N

Sampling frequency  
Y: 13.5 MHz, R-Y/B-Y: 3.375 MHz  
Quantization  
8 bits

AUDIO PERFORMANCE

Frequency response  
48 kHz: 20 Hz to 20 kHz +0.5/-1.0 dB, 32 kHz: 20 Hz to 14.5 kHz +0.5/-1.0 dB  
Dynamic range  
More than 80 dB

Distortion (at 1 kHz, emphasis ON, reference level)  
Less than 0.12% (at 1 kHz, reference level, 48 kHz)

BUILT-IN LCD MONITOR

Built-in LCD monitor  
2.5-inch type color LCD monitor, resolution: 214,000 (964 x 222) pixels

VIEWFINDER

CRT  
1.5-inch type monochrome  
Indicators  
REC TALLY (2), TAKE TALLY, BATT, SHUTTER, GAIN UP  
Horizontal resolution  
600 TV lines  
MICROPHONE  
Microphone  
Electret condenser microphone (detachable)

## DVCAM Camcorders

### DSR-400L DVCAM Camcorder

The DSR-400L is a DVCAM camcorder that adopts three 2/3-inch type Power HAD EX CCDs with a 4:3 aspect ratio, ideal for applications ranging from video journalism and event videography to newsgathering and independent movie-making.

#### Features

- 2/3-inch type Power HAD EX CCD ●12-bit A/D conversion ●Advanced digital signal processing (ADSP)
- DVCAM/DV selectable recording ●Long recording time: up to 276 minutes at DV (SP) mode and up to 184 minutes at DVCAM mode with a standard-size cassette
- High-Quality audio recordings ●Digital output to external devices via an i.LINK interface ●Quick FF/REW capabilities ●Rugged and ergonomic design ●Compact and lightweight: approximately 6.5 kg (14 lb 5 oz) including the DXF-801 viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette and VCL-917BY lens (supplied with the DSR-400K package) ●Low power consumption of approximately 17 W (with the DC 12 V power supply, REC mode, viewfinder and LCD monitor off) ●User-friendly menu controls ●Optical ND filter and electric CC filter ●Battery-remaining display on the viewfinder and LCD monitor ●Intelligent light system
- Supplied DXF-801 viewfinder ●User assignable function-buttons ●Turbo gain: max 36 dB ●Optional camera adaptor for wireless microphone receiver
- Memory stick system stores camera setup parameters
- Adjustable shoulder pad ●TruEye processor ●Adaptive highlight control ●Triple skin tone detail control
- Electronic soft focus ●2.5-inch (\*1) type color LCD monitor ●Variable black gamma range ●Auto Tracing White balance (ATW) ●Multi-matrix function ●Color temperature control ●Interval recording

(\*1) Viewable area measured diagonally. The lens is optional.



#### Supplied Accessories

DXF-801 Viewfinder with microphone holder (1)  
VCT-U14 Tripod Adaptor (1)  
External microphone (1)  
Shoulder strap (1)

#### Optional Accessories

CA-WR855 Camera Adaptor  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (66U)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)  
ECM-670 Electret Condenser Microphone (U)  
ECM-670 Electret Condenser Microphone (E)  
ECM-672 Electret Condenser Microphone (U)  
ECM-672 Electret Condenser Microphone (E)  
DXF-51 5-inch Monochrome Viewfinder  
BP-GL95 Rechargeable Lithium-ion Battery Pack

BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
LC-DS300SFT Soft Carrying Case  
LCR-1 Camera Rain Cover  
CCFD-L Cables DV Cables (6-pin to 4-pin)  
CCF-L Cables DV Cables (6-pin to 6-pin)

#### Optional Boards

CBK-SC01 Analog Composite Input Board  
CBK-SD01 SDI Output Board

DVCAM Camcorders

Specifications

GENERAL

Power requirements  
DC 12 V (11 to 17V)

Power consumption  
Approx. 17 W (with DC 12 V power supply, REC mode, viewfinder off, LCD monitor off)

Operating temperature  
0 to +40 °C (+32 to +104 °F)

Storage temperature  
-20 to +60 °C (-4 to +140 °F)

Operating humidity  
25 to 85%

Mass  
Approx. 6.5 kg (14 lb 5 oz) (with viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette, VCL-917BY lens)

Continuous operating time  
Approx. 300 min. with BP-GL95 battery, REC mode

SIGNAL INPUTS/OUTPUTS

Video inputs  
Genlock video  
BNC, 1.0 Vp-p, 75 Ω

Audio input (CH-1/2)  
XLR-3 (2), female, -60 dBu/+4 dBu, 10 kΩ, balanced

Microphone input  
XLR-3, female, -60 dBu

Time code input  
BNC, 0.5 to 18 Vp-p, 10 kΩ

Video outputs  
i.LINK  
i.LINK, 6-pin IEEE 1394-based

Analog composite  
BNC, 1.0 Vp-p, 75 Ω

Audio output (CH-1/2)  
Pin-jacks (2), -10dBu, 47 kΩ

Time code output  
BNC, 1.0 Vp-p, 75 Ω

Monitor output  
BNC, 1.0 Vp-p, 75 Ω

Earphone output  
Mini-jack

OTHER INPUTS/OUTPUTS

Lens  
12-pin

VF  
20-pin

Wireless microphone  
7-pin

Light  
2-pin, DC 12 V, max. 50 W

DC input  
XLR-4-pin, male, DC 11 to 17 V

DC output  
4-pin (for wireless microphone receiver), DC 12 V (max. 0.2 A)

Battery terminal  
5-pin

CAMERA PERFORMANCE

Pickup device  
3-chip 2/3-inch type Power HAD EX CCD

Aspect ratio  
4:3

Total picture elements (H x V)  
1038 x 1008

Effective picture elements (H x V)  
980 x 988

Optical system  
Spectral system  
F1.4 prism (with quarts filter)

Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Lens mount  
2/3-inch type Sony bayonet mount

Electrical characteristics  
Signal system  
NTSC color system

Scan format  
525/59.94i

Sync system  
Internal and External with the VBS or BS signal

A/D conversion  
12 bits

Sensitivity  
F11 (typical) (2000 lx, 89.9% reflectance)

Minimum illumination  
0.5 lx (F1.4 lens, +36 dB gain, shutter off)

Smear level  
-140 dB (typical)

Video S/N ratio  
65 dB (typical)

Horizontal resolution  
920 TV lines

Vertical resolution  
450 TV lines (with EVS) and 400 TV lines (without EVS)

Shutter speed  
1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s

ECS  
60 to 6000 Hz

Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36 dB (for GAIN LOW, GAIN MID, GAIN HIGH and GAIN TURBO positions)

VIDEO PERFORMANCE

Recording format  
Video  
DVCAM/DV (SP) (25 Mb/s)

Audio  
2 ch/16-bit/48 kHz, 2 ch/12-bit/32 kHz

Record/playback time  
DVCAM: 184 min (with the PDV-184ME), DV SP: 276 min (with the PDV-184ME)

Fast forward time  
Approx. 45 s (with the PDVM-40ME), approx. 2 min 30 s (with the PDV-184ME)

Rewind time  
Approx. 45 s (with the PDVM-40ME), approx. 2 min 30 s (with the PDV-184ME)

Recommended recording media

PDV-184ME/124ME/94ME/64ME/34ME/184N/124N/94N/64N/34N, PDVM-184ME/124ME/94ME/64ME/34ME/184N/124N/94N/64N/34N

Sampling frequency  
Y: 13.5 MHz, R-Y/B-Y: 3.375 MHz

Quantization  
8 bits

AUDIO PERFORMANCE

Frequency response  
48 kHz: 20 Hz to 20 kHz +0.5/-1.0 dB, 32 kHz: 20 Hz to 14.5 kHz +0.5/-1.0 dB

Dynamic range  
More than 80 dB

Distortion (at 1 kHz, emphasis ON, reference level)  
Less than 0.12% (at 1 kHz, reference level, 48 kHz)

BUILT-IN LCD MONITOR

Built-in LCD monitor  
2.5-inch type color LCD monitor, resolution: 214,000 (964 x 222) pixels

VIEWFINDER

CRT  
1.5-inch type monochrome

Indicators  
REC TALLY (2), TAKE TALLY, BATT, SHUTTER, GAIN UP

Horizontal resolution  
600 TV lines

MICROPHONE  
Microphone  
Electret condenser microphone (detachable)

## DVCAM Camcorders

### DSR-400PK DVCAM Camcorder

The DSR-400PK is a DVCAM camcorder that adopts three 2/3-inch type Power HAD EX CCDs with a 4:3 aspect ratio, ideal for applications ranging from video journalism and event videography to newsgathering and independent movie-making. The DSR-400PK includes a VCL-917BY Zoom Lens.

#### Features

- 2/3-inch type Power HAD EX CCD ●12-bit A/D conversion ●Advanced digital signal processing (ADSP)
- DVCAM/DV selectable recording ●Long recording time: up to 276 minutes at DV (SP) mode and up to 184 minutes at DVCAM mode with a standard-size cassette
- High-Quality audio recordings ●Digital output to external devices via an i.LINK interface ●Quick FF/REW capabilities ●Rugged and ergonomic design ●Compact and lightweight: approximately 6.5 kg (14 lb 5 oz) including the DXF-801 viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette and VCL-917BY lens (supplied with the DSR-400PK package) ●Low power consumption of approximately 17 W (with the DC 12 V power supply, REC mode, viewfinder and LCD monitor off) ●User-friendly menu controls ●Optical ND filter and electric CC filter ●Battery-remaining display on the viewfinder and LCD monitor ●Intelligent light system
- Supplied DXF-801 viewfinder ●User assignable function-buttons ●Turbo gain: max 36 dB ●Optional camera adaptor for wireless microphone receiver
- Memory stick system stores camera setup parameters
- Adjustable shoulder pad ●TruEye processor ●Adaptive highlight control ●Triple skin tone detail control
- Electronic soft focus ●2.5-inch (\*1) type color LCD monitor ●Variable black gamma range ●Auto Tracing White balance (ATW) ●Multi-matrix function ●Color temperature control ●Interval recording

(\*1) Viewable area measured diagonally.



#### Supplied Accessories

VCL-917BY ZOOM LENS (1)  
DXF-801 Viewfinder with microphone holder (1)  
VCT-U14 Tripod Adaptor (1)  
External microphone (1)  
Shoulder strap (1)

#### Optional Accessories

CA-WR855 Camera Adaptor  
CA-WR855 Camera Adaptor  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
ECM-670 Electret Condenser Microphone (E)  
ECM-670 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone (E)  
DXF-51 5-inch Monochrome Viewfinder  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack

BP-IL75 Rechargeable Lithium-ion Battery Pack

BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
LC-DS300SFT Soft Carrying Case  
LCR-1 Camera Rain Cover  
CCFD-L Cables DV Cables (6-pin to 4-pin)  
CCF-L Cables DV Cables (6-pin to 6-pin)

#### Optional Boards

CBK-SC01 Analog Composite Input Board  
CBK-SD01 SDI Output Board

DVCAM Camcorders

Specifications

GENERAL

Power requirements  
DC 12 V (11 to 17V)  
Power consumption  
Approx. 17 W (with DC 12 V power supply, REC mode, viewfinder off, LCD monitor off)  
Operating temperature  
0 to +40 °C (+32 to +104 °F)  
Storage temperature  
-20 to +60 °C (-4 to +140 °F)  
Operating humidity  
25 to 85%  
Mass  
Approx. 6.5 kg (14 lb 5 oz) (with viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette, VCL-917BY lens)  
Continuous operating time  
Approx. 300 min. with BP-GL95 battery, REC mode

SIGNAL INPUTS/OUTPUTS

Video inputs  
Genlock video  
BNC, 1.0 Vp-p, 75 Ω  
Audio input (CH-1/2)  
BNC, 1.0 Vp-p, 75 Ω  
Microphone input  
XLR-3, female, -60 dBu  
Time code input  
BNC, 0.5 to 18 Vp-p, 10 kΩ  
Video outputs  
i.LINK  
i.LINK, 6-pin IEEE 1394-based  
Analog composite  
BNC, 1.0 Vp-p, 75 Ω  
Audio output (CH-1/2)  
Pin-jacks (2), -10dBu, 47 kΩ  
Time code output  
BNC, 1.0 Vp-p, 75 Ω  
Monitor output  
BNC, 1.0 Vp-p, 75 Ω  
Earphone output  
Mini-jack

OTHER INPUTS/OUTPUTS

Lens  
12-pin  
VF  
20-pin  
Wireless microphone  
7-pin  
Light  
2-pin, DC 12 V, max. 50 W  
DC input  
XLR-4-pin, male, DC 11 to 17 V  
DC output  
4-pin (for wireless microphone receiver), DC 12 V (max. 0.2 A)  
Battery terminal  
5-pin

CAMERA PERFORMANCE

Pickup device  
Pickup device  
3-chip 2/3-inch type Power HAD EX  
CCD  
Aspect ratio  
4:3  
Total picture elements (H x V)  
1038 x 1188  
Effective picture elements (H x V)  
980 x 1064  
Optical system  
Spectral system  
F1.4 prism (with quarts filter)

Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
Lens mount  
2/3-inch type Sony bayonet mount  
Electrical characteristics  
Signal system  
PAL color system  
Scan format  
625/50i  
Sync system  
Internal and External with the VBS or BS signal  
A/D conversion  
12 bits  
Sensitivity  
F11 (typical) (2000 lx, 89.9% reflectance)  
Minimum illumination  
0.5 lx (F1.4 lens, +36 dB gain, shutter off)  
Smear level  
-140 dB (typical)  
Video S/N ratio  
63 dB (typical)  
Horizontal resolution  
920 TV lines  
Vertical resolution  
530 TV lines (with EVS) and 480 TV lines (without EVS)  
Shutter speed  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s  
ECS  
50 to 6000 Hz  
Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36 dB (for GAIN LOW, GAIN MID, GAIN HIGH and GAIN TURBO positions)

VIDEO PERFORMANCE

Recording format  
Video  
DVCAM/DV (SP) (25 Mb/s)  
Audio  
2 ch/16-bit/48 kHz, 2 ch/12-bit/32 kHz  
Record/playback time  
DVCAM: 184 min (with the PDV-184ME),  
DV SP: 276 min (with the PDV-184ME)  
Fast forward time  
Approx. 45 s (with the PDVM-40ME),  
approx. 2 min 30 s (with the PDV-184ME)  
Rewind time  
Approx. 45 s (with the PDVM-40ME),  
approx. 2 min 30 s (with the PDV-184ME)  
Recommended recording media

PDV-184ME/124ME/94ME/64ME/34ME/184N/124N/94N/64N/34N,  
PDVM-184ME/124ME/94ME/64ME/34ME/184N/124N/94N/64N/34N

Sampling frequency  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization  
8 bits

AUDIO PERFORMANCE

Frequency response  
48 kHz: 20 Hz to 20 kHz +0.5/-1.0 dB, 32 kHz: 20 Hz to 14.5 kHz +0.5/-1.0 dB  
Dynamic range  
More than 80 dB  
Distortion (at 1 kHz, emphasis ON, reference level)  
Less than 0.12% (at 1 kHz, reference level, 48 kHz)

BUILT-IN LCD MONITOR

Built-in LCD monitor  
2.5-inch type color LCD monitor, resolution: 214,000 (964 x 222) pixels

VIEWFINDER

CRT  
1.5-inch type monochrome  
Indicators  
REC TALLY (2), TAKE TALLY, BATT, SHUTTER, GAIN UP  
Horizontal resolution  
600 TV lines

MICROPHONE

Microphone  
Electret condenser microphone (detachable)

## DVCAM Camcorders

### DSR-400PL DVCAM Camcorder

The DSR-400PL is a DVCAM camcorder that adopts three 2/3-inch type Power HAD EX CCDs with a 4:3 aspect ratio, ideal for applications ranging from video journalism and event videography to newsgathering and independent movie-making.

#### Features

- 2/3-inch type Power HAD EX CCD ●12-bit A/D conversion ●Advanced digital signal processing (ADSP)
- DVCAM/DV selectable recording ●Long recording time: up to 276 minutes at DV (SP) mode and up to 184 minutes at DVCAM mode with a standard-size cassette
- High-Quality audio recordings ●Digital output to external devices via an i.LINK interface ●Quick FF/REW capabilities ●Rugged and ergonomic design ●Compact and lightweight: approximately 6.5 kg (14 lb 5 oz) including the DXF-801 viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette and VCL-917BY lens (supplied with the DSR-400PK package)
- Low power consumption of approximately 17 W (with the DC 12 V power supply, REC mode, viewfinder and LCD monitor off)
- User-friendly menu controls ●Optical ND filter and electric CC filter ●Battery-remaining display on the viewfinder and LCD monitor ●Intelligent light system
- Supplied DXF-801 viewfinder ●User assignable function-buttons ●Turbo gain: max 36 dB ●Optional camera adaptor for wireless microphone receiver
- Memory stick system stores camera setup parameters
- Adjustable shoulder pad ●TruEye processor ●Adaptive highlight control ●Triple skin tone detail control
- Electronic soft focus ●2.5-inch (\*1) type color LCD monitor ●Variable black gamma range ●Auto Tracing White balance (ATW) ●Multi-matrix function ●Color temperature control ●Interval recording

(\*1) Viewable area measured diagonally. The lens is optional.



#### Supplied Accessories

DXF-801 Viewfinder with microphone holder (1)  
VCT-U14 Tripod Adaptor (1)  
External microphone (1)  
Shoulder strap (1)

#### Optional Accessories

CA-WR855 Camera Adaptor  
CA-WR855 Camera Adaptor  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
ECM-670 Electret Condenser Microphone (E)  
ECM-670 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone (E)  
DXF-51 5-inch Monochrome Viewfinder  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack

BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
LC-DS300SFT Soft Carrying Case  
LCR-1 Camera Rain Cover  
CCFD-L Cables DV Cables (6-pin to 4-pin)  
CCF-L Cables DV Cables (6-pin to 6-pin)

#### Optional Boards

CBK-SC01 Analog Composite Input Board  
CBK-SD01 SDI Output Board

DVCAM Camcorders

Specifications

GENERAL

Power requirements  
DC 12 V (11 to 17V)

Power consumption  
Approx. 17 W (with DC 12 V power supply, REC mode, viewfinder off, LCD monitor off)

Operating temperature  
0 to +40 °C (+32 to +104 °F)

Storage temperature  
-20 to +60 °C (-4 to +140 °F)

Operating humidity  
25 to 85%

Mass  
Approx. 6.5 kg (14 lb 5 oz) (with viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette, VCL-917BY lens)

Continuous operating time  
Approx. 300 min. with BP-GL95 battery, REC mode

SIGNAL INPUTS/OUTPUTS

Video inputs  
Genlock video  
BNC, 1.0 Vp-p, 75 Ω

Audio input (CH-1/2)  
BNC, 1.0 Vp-p, 75 Ω

Microphone input  
XLR-3, female, -60 dBu

Time code input  
BNC, 0.5 to 18 Vp-p, 10 kΩ

Video outputs  
i.LINK  
i.LINK, 6-pin IEEE 1394-based

Analog composite  
BNC, 1.0 Vp-p, 75 Ω

Audio output (CH-1/2)  
Pin-jacks (2), -10dBu, 47 kΩ

Time code output  
BNC, 1.0 Vp-p, 75 Ω

Monitor output  
BNC, 1.0 Vp-p, 75 Ω

Earphone output  
Mini-jack

OTHER INPUTS/OUTPUTS

Lens  
12-pin

VF  
20-pin

Wireless microphone  
7-pin

Light  
2-pin, DC 12 V, max. 50 W

DC input  
XLR-4-pin, male, DC 11 to 17 V

DC output  
4-pin (for wireless microphone receiver), DC 12 V (max. 0.2 A)

Battery terminal  
5-pin

CAMERA PERFORMANCE

Pickup device  
Pickup device  
3-chip 2/3-inch type Power HAD EX CCD

Aspect ratio  
4:3

Total picture elements (H x V)  
1038 x 1188

Effective picture elements (H x V)  
980 x 1064

Optical system  
Spectral system  
F1.4 prism (with quartz filter)

Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND

Lens mount  
2/3-inch type Sony bayonet mount

Electrical characteristics

Signal system  
PAL color system

Scan format  
625/50i

Sync system  
Internal and External with the VBS or BS signal

A/D conversion  
12 bits

Sensitivity  
F11 (typical) (2000 lx, 89.9% reflectance)

Minimum illumination  
0.5 lx (F1.4 lens, +36 dB gain, shutter off)

Smear level  
-140 dB (typical)

Video S/N ratio  
63 dB (typical)

Horizontal resolution  
920 TV lines

Vertical resolution  
530 TV lines (with EVS) and 480 TV lines (without EVS)

Shutter speed  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s

ECS  
50 to 6000 Hz

Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36 dB (for GAIN LOW, GAIN MID, GAIN HIGH and GAIN TURBO positions)

VIDEO PERFORMANCE

Recording format  
Video  
DVCAM/DV (SP) (25 Mb/s)

Audio  
2 ch/16-bit/48 kHz, 2 ch/12-bit/32 kHz

Record/playback time  
DVCAM: 184 min (with the PDV-184ME), DV SP: 276 min (with the PDV-184ME)

Fast forward time  
Approx. 45 s (with the PDVM-40ME), approx. 2 min 30 s (with the PDV-184ME)

Rewind time  
Approx. 45 s (with the PDVM-40ME), approx. 2 min 30 s (with the PDV-184ME)

Recommended recording media

PDV-184ME/124ME/94ME/64ME/34ME/184N/124N/94N/64N/34N,  
PDVM-184ME/124ME/94ME/64ME/34ME/184N/124N/94N/64N/34N

Sampling frequency  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization  
8 bits

AUDIO PERFORMANCE

Frequency response  
48 kHz: 20 Hz to 20 kHz +0.5/-1.0 dB, 32 kHz: 20 Hz to 14.5 kHz +0.5/-1.0 dB

Dynamic range  
More than 80 dB

Distortion (at 1 kHz, emphasis ON, reference level)  
Less than 0.12% (at 1 kHz, reference level, 48 kHz)

BUILT-IN LCD MONITOR

Built-in LCD monitor  
2.5-inch type color LCD monitor, resolution: 214,000 (964 x 222) pixels

VIEWFINDER

CRT  
1.5-inch type monochrome

Indicators  
REC TALLY (2), TAKE TALLY, BATT, SHUTTER, GAIN UP

Horizontal resolution  
600 TV lines

MICROPHONE

Microphone  
Electret condenser microphone (detachable)

## DVCAM Camcorders

### DSR-450WSL DVCAM Camcorder

The DSR-450WSL is a DVCAM camcorder that adopts three 2/3-inch type Power HAD EX CCDs with a 16:9 aspect ratio to shoot in both 16:9 and 4:3 aspect ratios, ideal for applications ranging from video journalism and event videography to newsgathering and independent movie-making. In addition to the DSR-400L features, the DSR-450WSL further offers unique functions such as 24P (24.976P) progressive mode with 2-3 pull-down, selectable gamma with a film-like gamma settings and a slow shutter feature.

#### Features

- 2/3-inch type power HAD EX CCD ●Switchable aspect ratio (16:9/4:3) ●12-bit A/D conversion ●Advanced digital signal processing (ADSP) ●DVCAM/DV selectable recording ●Long recording time: up to 276 minutes at DV (SP) mode and up to 184 minutes at DVCAM mode with a standard-size cassette ●High-Quality audio recordings ●Film-like images with progressive mode ●Digital output to external devices via an i.LINK interface ●Quick FF/REW capabilities ●Rugged and ergonomic design ●Compact and lightweight: approximately 6.5 kg (14 lb 5 oz) including the DXF-801 viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette and VCL-917BY lens (supplied with the DSR-400K package) ●Low power consumption of approximately 17 W (with the DC 12 V power supply, REC mode, viewfinder and LCD monitor off) ●User-friendly menu controls ●Optical ND filter and electric CC filter ●Battery-remaining display on the viewfinder and LCD monitor ●Intelligent light system ●2.5-inch (\*1) type color LCD monitor ●Supplied DXF-801 viewfinder ●User assignable function-buttons ●Turbo gain: max. 36 dB ●Slow shutter mode: 1 to 8 to 16 frames accumulation ●Optional camera adaptor for wireless microphone receiver ●Memory stick system stores camera setup parameters ●Adjustable shoulder pad ●Versatile interfaces: SDI output and composite input with the optional boards ●Camera remote control via Sony RM-B150/B750 ●TruEye processor ●Adaptive highlight control ●Triple skin tone detail control ●Electronic soft focus ●Selectable gamma table including film-like gamma ●Variable black gamma range ●Auto Tracing White balance (ATW) ●Multi-matrix function ●Color temperature control ●Interval recording

(\*1) Viewable area measured diagonally. The lens is optional.

#### Supplied Accessories

DXF-801 Viewfinder with microphone holder (1)  
VCT-U14 Tripod Adaptor (1)  
External microphone (1)  
Shoulder strap (1)

#### Optional Accessories

CA-WR855 Camera Adaptor  
WRR-855A UHF Synthesized Diversity Tuner (64U)  
WRR-855A UHF Synthesized Diversity Tuner (66U)  
WRR-855A UHF Synthesized Diversity Tuner (68U)  
WRR-855A UHF Synthesized Diversity Tuner (KR)

ECM-670 Electret Condenser Microphone (U)  
ECM-670 Electret Condenser Microphone (E)  
ECM-672 Electret Condenser Microphone (U)  
ECM-672 Electret Condenser Microphone (E)  
DXF-51 5-inch Monochrome Viewfinder  
RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack

BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
AC-DN10 AC Adaptor/Charger  
AC-DN2B AC Adaptor  
LC-DS300SFT Soft Carrying Case  
LCR-1 Camera Rain Cover  
CCFD-L Cables DV Cables (6-pin to 4-pin)  
CCF-L Cables DV Cables (6-pin to 6-pin)

#### Optional Boards

CBK-SC01 Analog Composite Input Board  
CBK-SD01 SDI Output Board



DVCAM Camcorders

Specifications

GENERAL

Power requirements  
DC 12 V (11 to 17V)  
Power consumption  
Approx. 17 W (with DC 12 V power supply,  
REC mode, viewfinder off, LCD monitor off)  
Operating temperature  
0 to +40 °C (+32 to +104 °F)  
Storage temperature  
-20 to +60 °C (-4 to +140 °F)  
Operating humidity  
25 to 85%

Mass  
Approx. 6.5 kg (14 lb 5 oz) (with  
viewfinder, microphone, BP-GL65 battery,  
mini-size DVCAM cassette, VCL-917BY  
lens)  
Continuous operating time  
Approx. 300 min. with BP-GL95 battery,  
REC mode

SIGNAL INPUTS/OUTPUTS

Video inputs  
Analog composite  
BNC, 1.0 Vp-p, 75 Ω (with the  
CBK-SC01)  
BNC, 1.0 Vp-p, 75 Ω (with the CBK-SC01)  
BNC, 1.0 Vp-p, 75 Ω  
Audio input (CH-1/2)  
XLR-3 (2), female, -60 dBu/+4 dBu, 10 kΩ,  
balanced  
Microphone input  
XLR-3, female, -60 dBu  
Time code input  
BNC, 0.5 to 18 Vp-p, 10 kΩ  
Video outputs  
SDI  
BNC, 0.8 Vp-p, 75 Ω (with the  
CBK-SD01)  
i.LINK  
i.LINK, 6-pin IEEE 1394-based  
Analog composite  
BNC, 1.0 Vp-p, 75 Ω  
Audio output (CH-1/2)  
Pin-jacks (2), -10dBu, 47 kΩ  
Time code output  
BNC, 1.0 Vp-p, 75 Ω  
Monitor output  
BNC, 1.0 Vp-p, 75 Ω  
Earphone output  
Mini-jack

OTHER INPUTS/OUTPUTS

Lens  
12-pin  
VF  
20-pin  
Remote  
8-pin  
Wireless microphone  
7-pin  
Light  
2-pin, DC 12 V, max. 50 W  
DC input  
XLR-4-pin, male, DC 11 to 17 V  
DC output  
4-pin (for wireless microphone receiver),  
DC 12 V (max. 0.2 A)  
Battery terminal  
5-pin

CAMERA PERFORMANCE

Pickup device  
Pickup device  
3-chip 2/3-inch type Power HAD EX  
CCD

Aspect ratio  
16:9/4:3 switchable  
Total picture elements (H x V)  
1038 x 1008  
Effective picture elements (H x V)  
980 x 988  
Optical system  
Spectral system  
F1.4 prism (with quartz filter)  
Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4:  
1/64ND  
Lens mount  
2/3-inch type Sony bayonet mount  
Electrical characteristics  
Signal system  
NTSC color system  
Scan format  
525/59.94i, 525/29.97P, 525/23.976P  
Sync system  
Internal and External with the VBS or BS  
signal  
A/D conversion  
12 bits  
Sensitivity  
F11 (typical) (2000 lx, 89.9%  
reflectance)  
Minimum illumination  
0.5 lx (F1.4 lens, +36 dB gain, shutter  
off), 0.03 lx (with slow shutter mode at  
16 frames accumulation)  
Smear level  
-140 dB (typical)  
Video S/N ratio  
65 dB (typical)  
Horizontal resolution  
850 TV lines (4:3 mode), 800 TV lines  
(16:9 mode)  
Vertical resolution  
450 TV lines (with EVS) and 400 TV  
lines (without EVS) at 525/59.94i mode  
485 TV lines at 525/29.97P and  
525/23.976P modes  
Shutter speed  
1/100, 1/125, 1/250, 1/500, 1/1000,  
1/2000 s at 525/59.94i mode  
1/40, 1/60, 1/120, 1/125, 1/250, 1/500,  
1/1000, 1/2000 s at 525/29.97P mode  
1/32, 1/48, 1/96, 1/125, 1/250, 1/500,  
1/1000, 1/2000 s at 525/23.976P mode

ECS  
60 to 6000 Hz at 525/59.94i mode  
30 to 7000 Hz at 525/29.97P mode  
24 to 5000 Hz at 525/23.976P mode  
Slow shutter  
1/30, 1/15, 1/10, 1/7.5, 1/6, 1/4.3, 1/3.8,  
1/1.9 s (1 to 8, 16 frames)  
Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36 dB (for  
GAIN LOW, GAIN MID, GAIN HIGH and  
GAIN TURBO positions)

VIDEO PERFORMANCE

Recording format  
Video  
DVCAM/DV (SP) (25 Mb/s)  
Audio  
2 ch/16-bit/48 kHz, 2 ch/12-bit/32 kHz  
Record/playback time  
DVCAM: 184 min (with the PDV-184ME),  
DV SP: 276 min (with the PDV-184ME)  
Fast forward time  
Approx. 45 s (with the PDVM-40ME),  
approx. 2 min 30 s (with the PDV-184ME)

Rewind time  
Approx. 45 s (with the PDVM-40ME),  
approx. 2 min 30 s (with the PDV-184ME)  
Recommended recording media  
PDV-184ME/124ME/94ME/64ME/34ME/184  
N/124N/94N/64N/34N,  
PDVM-184ME/124ME/94ME/64ME/34ME/18  
4N/124N/94N/64N/34N  
Sampling frequency  
Y: 13.5 MHz, R-Y/B-Y: 3.375 MHz  
Quantization  
8 bits

AUDIO PERFORMANCE

Frequency response  
48 kHz: 20 Hz to 20 kHz +0.5/-1.0 dB, 32  
kHz: 20 Hz to 14.5 kHz +0.5/-1.0 dB  
Dynamic range  
More than 80 dB  
Distortion (at 1 kHz, emphasis ON, reference  
level)  
Less than 0.12% (at 1 kHz, reference level,  
48 kHz)

BUILT-IN LCD MONITOR

Built-in LCD monitor  
2.5-inch type color LCD monitor, resolution:  
214,000 (964 x 222) pixels

VIEWFINDER

CRT  
1.5-inch type monochrome  
Indicators  
REC TALLY (2), TAKE TALLY, BATT,  
SHUTTER, GAIN UP  
Horizontal resolution  
600 TV lines

MICROPHONE

Microphone  
Electret condenser microphone  
(detachable)

## DVCAM Camcorders

### DSR-450WSPL DVCAM Camcorder

The DSR-450WSPL is a DVCAM camcorder that adopts three 2/3-inch type Power HAD EX CCDs with a 16:9 aspect ratio to shoot in both 16:9 and 4:3 aspect ratios, ideal for applications ranging from video journalism and event videography to newsgathering and independent movie-making. In addition to the DSR-400PL features, the DSR-450WSPL further offers unique functions such as 25P progressive mode, selectable gamma with a film-like gamma settings and a slow shutter feature.

#### Features

- 2/3-inch type power HAD EX CCD ●Switchable aspect ratio (16:9/4:3) ●12-bit A/D conversion ●Advanced digital signal processing (ADSP) ●DVCAM/DV selectable recording ●Long recording time: up to 276 minutes at DV (SP) mode and up to 184 minutes at DVCAM mode with a standard-size cassette ●High-Quality audio recordings ●Film-like images with progressive mode ●Digital output to external devices via an i.LINK interface ●Quick FF/REW capabilities ●Rugged and ergonomic design ●Compact and lightweight: approximately 6.5 kg (14 lb 5 oz) including the DXF-801 viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette and VCL-917BY lens (supplied with the DSR-400PK package) ●Low power consumption of approximately 17 W (with the DC 12 V power supply, REC mode, viewfinder and LCD monitor off) ●User-friendly menu controls ●Optical ND filter and electric CC filter ●Battery-remaining display on the viewfinder and LCD monitor ●Intelligent light system ●2.5-inch (\*1) type color LCD monitor ●Supplied DXF-801 viewfinder ●User assignable function-buttons ●Turbo gain: max. 36 dB ●Slow shutter mode: 1 to 8 to 16 frames accumulation ●Optional camera adaptor for wireless microphone receiver ●Memory stick system stores camera setup parameters ●Adjustable shoulder pad ●Versatile interfaces: SDI output and composite input with the optional boards ●Camera remote control via Sony RM-B150/B750 ●TruEye processor ●Adaptive highlight control ●Triple skin tone detail control ●Electronic soft focus ●Selectable gamma table including film-like gamma ●Variable black gamma range ●Auto Tracing White balance (ATW) ●Multi-matrix function ●Color temperature control ●Interval recording

(\*1) Viewable area measured diagonally. The lens is optional.

#### Supplied Accessories

DXF-801 Viewfinder with microphone holder (1)  
VCT-U14 Tripod Adaptor (1)  
External microphone (1)  
Shoulder strap (1)

#### Optional Accessories

CA-WR855 Camera Adaptor  
CA-WR855 Camera Adaptor  
WRR-855A UHF Synthesized Diversity Tuner (AU)  
ECM-670 Electret Condenser Microphone (E)  
ECM-670 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone  
ECM-672 Electret Condenser Microphone (E)

DXF-51 5-inch Monochrome Viewfinder

RM-B750 Remote Control Unit  
RM-B150 Remote Control Unit  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-L60S Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BC-L70 Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
AC-DN10 AC Adaptor/Charger

AC-DN2B AC Adaptor

LC-DS300SFT Soft Carrying Case  
LCR-1 Camera Rain Cover  
CCFD-L Cables DV Cables (6-pin to 4-pin)  
CCF-L Cables DV Cables (6-pin to 6-pin)

#### Optional Boards

CBK-SC01 Analog Composite Input Board  
CBK-SD01 SDI Output Board



DVCAM Camcorders

Specifications

GENERAL

Power requirements  
DC 12 V (11 to 17V)  
Power consumption  
Approx. 17 W (with DC 12 V power supply, REC mode, viewfinder off, LCD monitor off)  
Operating temperature  
0 to +40 °C (+32 to +104 °F)  
Storage temperature  
-20 to +60 °C (-4 to +140 °F)  
Operating humidity  
25 to 85%  
Mass  
Approx. 6.5 kg (14 lb 5 oz) (with viewfinder, microphone, BP-GL65 battery, mini-size DVCAM cassette, VCL-917BY lens)

Continuous operating time  
Approx. 300 min. with BP-GL95 battery, REC mode

SIGNAL INPUTS/OUTPUTS

Video inputs  
Analog composite  
BNC, 1.0 Vp-p, 75 Ω (with the CBK-SC01)  
Genlock video  
BNC, 1.0 Vp-p, 75 Ω  
Audio input (CH-1/2)  
XLR-3 (2), female, -60 dBu/+4 dBu, 10 kΩ, balanced  
Microphone input  
XLR-3, female, -60 dBu  
Time code input  
BNC, 0.5 to 18 Vp-p, 10 kΩ  
Video outputs  
SDI  
BNC, 0.8 Vp-p, 75 Ω (with the CBK-SD01)  
i.LINK  
i.LINK, 6-pin IEEE 1394-based  
Analog composite  
BNC, 1.0 Vp-p, 75 Ω  
Audio output (CH-1/2)  
Pin-jacks (2), -10dBu, 47 kΩ  
Time code output  
BNC, 1.0 Vp-p, 75 Ω  
Monitor output  
BNC, 1.0 Vp-p, 75 Ω  
Earphone output  
Mini-jack

OTHER INPUTS/OUTPUTS

Lens  
12-pin  
VF  
20-pin  
Remote  
8-pin  
Wireless microphone  
7-pin  
Light  
2-pin, DC 12 V, max. 50 W  
DC input  
XLR-4-pin, male, DC 11 to 17 V  
DC output  
4-pin (for wireless microphone receiver), DC 12 V (max. 0.2 A)  
Battery terminal  
5-pin

CAMERA PERFORMANCE

Pickup device  
Pickup device  
3-chip 2/3-inch type Power HAD EX CCD

Aspect ratio  
16:9/4:3 switchable  
Total picture elements (H x V)  
1038 x 1188  
Effective picture elements (H x V)  
980 x 1064  
Optical system  
Spectral system  
F1.4 prism (with quartz filter)  
Built-in filters  
1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND  
Lens mount  
2/3-inch type Sony bayonet mount  
Electrical characteristics  
Signal system  
PAL color system  
Scan format  
625/50i, 625/25P  
Sync system  
Internal and External with the VBS or BS signal  
A/D conversion  
12 bits  
Sensitivity  
F11 (typical) (2000 lx, 89.9% reflectance)  
Minimum illumination  
0.5 lx (F1.4 lens, +36 dB gain, shutter off), 0.03 lx (with slow shutter mode at 16 frames accumulation)  
Smear level  
-140 dB (typical)  
Video S/N ratio  
63 dB (typical)  
Horizontal resolution  
850 TV lines (4:3 mode), 800 TV lines (16:9 mode)  
Vertical resolution  
530 TV lines (with EVS) and 480 TV lines (without EVS) at 625/50i mode  
575 TV lines at 625/25P mode  
Shutter speed  
1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 625/50i mode  
1/33, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 625/25P mode  
ECS  
50 to 6000 Hz at 625/50i mode  
25 to 6000 Hz at 625/25P mode  
Slow shutter  
1/25, 1/12.5, 1/8.3, 1/6.3, 1/5, 1/4.2, 1/3.6, 1/3.1, 1/1.6 s (1 to 8, 16 frames)  
Gain selection  
-3, 0, 3, 6, 9, 12, 18, 24, 30, 36 dB (for GAIN LOW, GAIN MID, GAIN HIGH and GAIN TURBO positions)

VIDEO PERFORMANCE

Recording format  
Video  
DVCAM/DV (SP) (25 Mb/s)  
Audio  
2 ch/16-bit/48 kHz, 2 ch/12-bit/32 kHz  
Record/playback time  
DVCAM: 184 min (with the PDV-184ME), DV SP: 276 min (with the PDV-184ME)  
Fast forward time  
Approx. 45 s (with the PDVM-40ME), approx. 2 min 30 s (with the PDV-184ME)  
Rewind time  
Approx. 45 s (with the PDVM-40ME), approx. 2 min 30 s (with the PDV-184ME)

Recommended recording media  
PDV-184ME/124ME/94ME/64ME/34ME/184 N/124N/94N/64N/34N, PDVM-184ME/124ME/94ME/64ME/34ME/184 N/124N/94N/64N/34N  
Sampling frequency  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz  
Quantization  
8 bits

AUDIO PERFORMANCE

Frequency response  
48 kHz: 20 Hz to 20 kHz +0.5/-1.0 dB, 32 kHz: 20 Hz to 14.5 kHz +0.5/-1.0 dB  
Dynamic range  
More than 80 dB  
Distortion (at 1 kHz, emphasis ON, reference level)  
Less than 0.12% (at 1 kHz, reference level, 48 kHz)

BUILT-IN LCD MONITOR

Built-in LCD monitor  
2.5-inch type color LCD monitor, resolution: 214,000 (964 x 222) pixels

VIEWFINDER

CRT  
1.5-inch type monochrome  
Indicators  
REC TALLY (2), TAKE TALLY, BATT, SHUTTER, GAIN UP

Horizontal resolution  
600 TV lines

MICROPHONE

Microphone  
Electret condenser microphone (detachable)

## DVCAM Camcorders

### DSR-PD170 DVCAM Camcorder

The DSR-PD170 is a 1/3-inch type 3CCD Digital Camcorder that uses the DVCAM format. Like its predecessor, the market acclaimed DSR-PD150, the DSR-PD170 addresses a broad spectrum of applications from video journalism, wedding and event videography, corporate and training productions, up to broadcast newsgathering, areas where picture quality, reliability, and mobility are prime concerns. In addition to inheriting all the attractive features of the DSR-PD150, the DSR-PD170 offers a range of enhancements for further improved audio and video quality and operability, and adds new accessories to meet even more diverse shooting scenarios. The DSR-PD170 is designed to become a handy tool for professional shooting in a wide range of applications.



#### Features

- Three 1/3-inch type CCDs Camera System ●Advanced HAD Technology ●Low Light Shooting ●Optical 12x Zoom Lens ●Optical Super SteadyShot System ●Large 180,000-dot LCD Precision Black & White Viewfinder ●DVCAM Recording ●16:9 Widescreen Acquisition Mode ●DVCAM/DV Selectable Recording ●2 Ch. XLR Audio Input and Supplied Directional Microphone ●16-bit/12-bit PCM Digital Sound and Audio Dub Capability ●Newly Developed Hybrid LCD Monitor with a High Resolution of more than 210,000 Pixels ●Simultaneous Operation of LCD Monitor and Viewfinder ●Large-sized Handle ●On-handle Zoom Lever and Rec. Start/Stop Button ●Supplied Lens Hood with Built-in Lens Cap ●Supplied Wide Conversion Lens and Additional Lens Hood

#### Supplied Accessories

AC-L15 AC Adaptor (1)  
ECM-NV1 Electret Condenser Microphone (1)  
NP-F330 Info LITHIUM Rechargeable Battery Pack (1)  
VCL-HG0758 Wide Conversion Lens (1)  
LSF-S58 Lens Hood for Wide Conversion Lens and Hood Cap (1)  
Lens Hood with Built-in Lens Cap (1)  
RMT-811 Remote Commander and R6 Batteries (2)  
Carrying Belt (1)  
i.LINK Cable Strap (1)  
Stereo AV Cable (1)

#### Optional Accessories

NP-F550 InfoLITHIUM Rechargeable Battery Pack  
NP-F750 InfoLITHIUM Rechargeable Battery Pack  
NP-F960 InfoLITHIUM Rechargeable Battery Pack  
VCL-HG1758 Tele Conversion Lens  
VF-58PK Filter Kit  
VCT-1170RM Video Tripod with Remote Control  
VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
PDV-ME tapes Digital Videocassette Tapes  
MSA-A "Memory Stick" IC Memory Media  
UWP-C1 UHF Synthesized Wireless Microphone Package (KR)  
UWP-C1 UHF Synthesized Wireless Microphone Package (6264U)  
UWP-C1 UHF Synthesized Wireless Microphone Package (6668U)  
ECM-670 Electret Condenser Microphone (U)  
ECM-672 Electret Condenser Microphone (U)  
DSR-DU1 Video Disk Unit

DVCAM Camcorders

Specifications

GENERAL

Power Requirements:  
DC 7.2 V (Battery), DC 8.4 V (AC adaptor)  
Power Consumption:  
Rec. with LCD viewfinder only:  
4.7 W  
Rec. with LCD monitor only:  
5.4 W  
Rec. with LCD viewfinder and LCD monitor:  
5.7 W  
Playback on LCD:  
4.1 W

Operating Temperature:  
0 to 40 °C (32 to 104 °F)

Storage Temperature:  
-20 to 60 °C (-4 to 140 °F)

Dimensions (W x H x D):  
118 x 180 x 393 mm (4 3/4 x 7 1/8 x 15 1/2 inches) (camcorder only)  
133 x 180 x 456 mm (5 1/4 x 7 1/8 x 18 inches) including microphone

Mass (camcorder only):  
Approx. 1.6 kg (3 lb 6 oz)

CAMERA PARTS

Lens:  
12:1 Variable Speed (1.2-22 sec.) zoom lens (48x digital zoom)  
F =6.0 to 72.0 mm; F1.6 to 2.4; Filter Diameter 58 mm

Focus:  
Auto/Manual (ring)/Infinity/One push auto

Imaging Device:  
Three 1/3-inch type CCDs  
Gross 380,000 pixels/effective 340,000 pixels  
Progressive/Interlace Scan

White Balance:  
Auto/One-push/Outdoor (5800 K)/Indoor (3200 K)

Shutter Speed:  
1/4, 1/8, 1/15, 1/30, 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500,1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000,1/10000 second

Exposure:  
Auto/Manual  
Minimum Illumination:  
1 lx with F1.6 at 18 dB gain

Horizontal Resolution:  
530 TV lines

Viewfinder:  
180,000 dot Black & White LCD  
Horizontal Resolution:  
500 TV lines

VTR PARTS

Audio Signal  
Rec: 48 kHz/16-bit, 32 kHz/12-bit  
Playback: 48 kHz/16-bit, 32 kHz/12-bit, 32 kHz/16-bit, 44.1 kHz/16-bit

Built-in Speaker:  
Dynamic Speaker, ø20 mm

LCD:  
Hybrid, 2.5-inch type, 211,200 dots (960 x 220)

Tape Speed:  
Approx. 28.2 mm/s (DVCAM mode)  
Approx. 18.8 mm/s (DV SP mode)

Maximum Recording Time:  
40 minutes (DVCAM mode)  
60 minutes (DV SP mode, with PDVM-40ME)

Video Signal:  
EIA Standard, NTSC color system

Connectors

Video IN/OUT  
RCA pin: (1)  
Luminance signal: 1 Vp-p, 75 Ω, unbalanced, sync negative

Audio IN/OUT  
RCA pin: (2), 327 mV  
Output impedance with less than 2.2 kΩ  
Input impedance with more than 47 kΩ

S-Video IN/OUT  
Mini-DIN 4 pin :(1)  
Luminance signal: 1 Vp-p, 75 Ω , unbalanced  
Chrominance signal: 0.286 Vp-p

Audio IN  
XLR 3-pin female: (2). -60 dBu, 3 kΩ, +4 dBu, 10 kΩ (0 dBu = 0.775 V rms)

Digital input/output  
i.LINK (DV): 4-pin (1)

Others  
LANC: Stereo mini jack (2.5 mm): (1)  
Headphone: Stereo mini jack (3.5 mm): (1)  
External DC IN: (1) 8.4 V for AC-L15 AC adaptor

## DVCAM Camcorders

### DSR-PD170P DVCAM Camcorder

The DSR-PD170P is a 1/3-inch type 3CCD Digital Camcorder that uses the DVCAM format. Like its predecessor, the market acclaimed DSR-PD150P, the DSR-PD170P addresses a broad spectrum of applications from video journalism, wedding and event videography, corporate and training productions, up to broadcast newsgathering, areas where picture quality, reliability, and mobility are prime concerns. In addition to inheriting all the attractive features of the DSR-PD150P, the DSR-PD170P offers a range of enhancements for further improved audio and video quality and operability, and adds new accessories to meet even more diverse shooting scenarios. The DSR-PD170P is designed to become a handy tool for professional shooting in a wide range of applications.



#### Features

- Three 1/3-inch type CCDs Camera System ●Advanced HAD Technology ●Low Light Shooting ●Optical 12x Zoom Lens ●Optical Super SteadyShot System ●Large 180,000-dot LCD Precision Black & White Viewfinder ●DVCAM Recording ●16:9 Widescreen Acquisition Mode ●DVCAM/DV Selectable Recording ●2 Ch. XLR Audio Input and Supplied Directional Microphone ●16-bit/12-bit PCM Digital Sound and Audio Dub Capability ●Newly Developed Hybrid LCD Monitor with a High Resolution of more than 210,000 Pixels ●Simultaneous Operation of LCD Monitor and Viewfinder ●Large-sized Handle ●On-handle Zoom Lever and Rec. Start/Stop Button ●Supplied Lens Hood with Built-in Lens Cap ●Supplied Wide Conversion Lens and Additional Lens Hood

#### Supplied Accessories

AC-L15 AC Adaptor (1)  
ECM-NV1 Electret Condenser Microphone (1)  
NP-F330 Info LITHIUM Rechargeable Battery Pack (1)  
VCL-HG0758 Wide Conversion Lens (1)  
LSF-S58 Lens Hood for Wide Conversion Lens and Hood Cap (1)  
Lens Hood with Built-in Lens Cap (1)  
RMT-811 Remote Commander and R6 Batteries (2)  
Carrying Belt (1)  
i.LINK Cable Strap (1)  
Stereo AV Cable (1)

#### MSA-A "Memory Stick" IC Memory Media

UWP-C1 UHF Synthesized Wireless Microphone Package (CN)  
UWP-C1 UHF Synthesized Wireless Microphone Package (62CE7)  
UWP-C1 UHF Synthesized Wireless Microphone Package (AU)  
UWP-C1 UHF Synthesized Wireless Microphone Package (67CE7)  
ECM-670 Electret Condenser Microphone (U)  
ECM-672 Electret Condenser Microphone (U)  
DSR-DU1 Video Disk Unit

#### Optional Accessories

NP-F550 InfoLITHIUM Rechargeable Battery Pack  
NP-F750 InfoLITHIUM Rechargeable Battery Pack  
NP-F960 InfoLITHIUM Rechargeable Battery Pack  
VCL-HG1758 Tele Conversion Lens  
VF-58PK Filter Kit  
VCT-1170RM Video Tripod with Remote Control  
VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
PDV-ME tapes Digital Videocassette Tapes

DVCAM Camcorders

Specifications

GENERAL

Power Requirements:  
DC 7.2 V (Battery), DC 8.4 V (AC adaptor)  
Power Consumption:  
Rec. with LCD viewfinder only:  
4.7 W  
Rec. with LCD monitor only:  
5.4 W  
Rec. with LCD viewfinder and LCD monitor:  
5.7 W  
Playback on LCD:  
4.1 W

Operating Temperature:  
0 to 40 °C (32 to 104 °F)

Storage Temperature:  
-20 to 60 °C (-4 to 140 °F)

Dimensions (W x H x D):  
118 x 180 x 393 mm (4 3/4 x 7 1/8 x 15 1/2 inches) (camcorder only)  
133 x 180 x 456 mm (5 1/4 x 7 1/8 x 18 inches) including microphone

Mass (camcorder only):  
Approx. 1.6 kg (3 lb 6 oz)

CAMERA PARTS

Lens:  
12:1 Variable Speed (1.2-22 sec.) zoom lens (48x digital zoom)  
F =6.0 to 72.0 mm; F1.6 to 2.4; Filter Diameter 58 mm

Focus:  
Auto/Manual (ring)/Infinity/One push auto

Imaging Device:  
Three 1/3-inch type CCDs  
Gross 450,000 pixels/effective 400,000 pixels  
Progressive/Interlace Scan

White Balance:  
Auto/One-push/Outdoor (5800 K)/Indoor (3200 K)

Shutter Speed:  
1/3, 1/6, 1/12, 1/25, 1/50, 1/60, 1/100, 1/120, 1/150, 1/215  
1/300, 1/425, 1/600, 1/1000, 1/1250, 1/1750, 1/2500, 1/3500, 1/6000, 1/10000 second

Exposure:  
Auto/Manual

Minimum Illumination:  
1 lx with F1.6 at 18 dB gain

Horizontal Resolution:  
530 TV lines

Viewfinder:  
180,000 dot Black & White LCD  
Horizontal Resolution:  
500 TV lines

VTR PARTS

Audio Signal  
Rec: 48 kHz/16-bit, 32 kHz/12-bit  
Playback: 48 kHz/16-bit, 32 kHz/12-bit, 32 kHz/16-bit, 44.1 kHz/16-bit

Built-in Speaker:  
Dynamic Speaker, ø20 mm

LCD:  
Hybrid, 2.5-inch type, 211,200 dots (960 x 220)

Tape Speed:  
Approx. 28.2 mm/s (DVCAM mode)  
Approx. 18.8 mm/s (DV SP mode)

Maximum Recording Time:  
40 minutes (DVCAM mode)  
60 minutes (DV SP mode, with PDVM-40ME)

Video Signal:  
CCIR Standard, PAL color system

Connectors

Video IN/OUT  
RCA pin: (1)  
Luminance signal: 1 Vp-p, 75 Ω, unbalanced, sync negative

Audio IN/OUT  
RCA pin: (2), 327 mV  
Output impedance with less than 2.2 kΩ  
Input impedance with more than 47 kΩ

S-Video IN/OUT  
Mini-DIN 4 pin :(1)  
Luminance signal: 1 Vp-p, 75 Ω, unbalanced  
Chrominance signal: 0.3 Vp-p

Audio IN  
XLR 3-pin female: (2). -60 dBu, 3 kΩ, +4 dBu, 10 kΩ (0 dBu = 0.775 V rms)

Digital input/output  
i.LINK (DV): 4-pin (1)

Others  
LANC: Stereo mini jack (2.5 mm): (1)  
Headphone: Stereo mini jack (3.5 mm): (1)  
External DC IN: (1) 8.4 V for AC-L15 AC adaptor

## DVCAM Camcorders

### DSR-PDX10 DVCAM Camcorder

#### Features

•Compact and lightweight: 1,050 g (2 lb 5 oz) with a battery and tape. •Newly developed Mega Pixel 1/4.7-inch type 3-CCD camera system •Switchable 4:3 and 16:9 image acquisition and recording modes •Precision 16:9 technology and wider angel of view in 16:9 mode •14-bit DXP (Digital Extended Processor) •Optical Super SteadyShot function •Custom presets •12x optical zoom/ 24x/ 48x precision digital zoom •Manual adjustment: exposure, shutter speed, white balance •Program AE: soft portrait, sports lesson, beach and ski, sunset and moon, landscape •Fader •Zebra patterns (100% or 70%) •Guide frame •Index marking •Date stamping (on to camera recording picture) •Recording/playback of the DVCAM/DV (SP mode) format (\*1)\*Various interfaces: i.LINK interface, analog audio and video in/out (AV-mini, S-video), USB (Mini-B), headphone (stereo-mini), remote (LANC) •XLR 2-ch audio adaptor for professional microphones •USB streaming function •180,000-dot precision black-and-white LCD monitor •3.5-inch(\*2) type 246,400-dot precision color LCD monitor •Touch panel operation for adjusting frequently used camera functions •InfoLITHIUM 'M series' battery system •Still-Picture Recording (Progressive Shutter System) •MPEG Movie Recording. Direct or from the DV/DVCAM tape. •Digital program editing (\*3) allow auto assembly-like editing without an edit controller •TC/User bit preset capability •Audio dubbing (only for DVCAM recorded tape) •Color Bar (BARS) •Hour meter

(\*1) The transition from cut to cut may not be smooth when recorded in DV (SP) format. In between scenes where the recording format is changed from DV to DVCAM, or vice versa, transition may not be smooth. This is a normal and expected phenomenon. Audio dubbing is not possible when recorded in DV (SP) format. (\*2) Viewable area measured diagonally. (\*3) Frame accuracy is not guaranteed.

#### Supplied Accessories

XLR adaptor (with a microphone holder) (1)  
 USB cable (1)  
 Image mixer for SONY/USB driver software  
 CD-RM (1)  
 ECM-NV1 (Monaural microphone) (1)  
 AC-L10 (AC adaptor) (1)  
 NP-FM50 (InfoLITHIUM rechargeable battery pack) (1)  
 RMT-811 (Remote commander and R6 batteries (x2) (1)  
 MSA-8A (IC recording media "Memory Stick") (1)  
 Stereo AV cable (1)  
 Lens hood (1)  
 Wide lens hood (1)  
 Hood cap (1)  
 Carrying belt (1)

#### Optional Accessories

ECM-670 Electret Condenser Microphone (U)  
 ECM-672 Electret Condenser Microphone (U)  
 NP-QM91D Rechargeable Battery Pack  
 VCL-HG0737X Wide Conversion Lens  
 LCH-TRV950 Hard Carrying Case  
 SPK-DVF4 Sports Pack  
 CAC-12 Camera Microphone Holder  
 EC-0.3C2 Microphone cable

HVL-FH1100 Flash  
 MSA-A "Memory Stick" IC Memory Media  
 VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)  
 VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
 VF-R37K ND Filter Kit  
 AC-SQ950D AC Adaptor/Charger



DVCAM Camcorders

Specifications

GENERAL

Power requirements:  
DC 7.2 V (Battery), DC 8.4 V (AC Adaptor)  
Power consumption:  
5.2 W using the viewfinder / 6.5 W using the LCD  
Operating temperature:  
0 °C to 40 °C (32 °F to 104 °F)  
Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)  
Dimensions (w x h x d):  
93 x 99 x 202 mm  
(3 3/4 x 4 x 8 inches)  
Mass:  
950 g (2 lb 1 oz) (camcorder only)

LENS PART

Zoom:  
12:1 variable speed zoom lens, f 3.6 to 43.2 mm, F 1.6 to 2.8  
Video (4:3): f 49 to 588 mm(\*)/(16:9): f 41 to 492 mm(\*), Still: f 41 to 492 mm(\*)  
Filter diameter:  
37 mm  
Focus:  
Auto/Manual (ring)/Infinity/One push auto

CAMERA PART

Imaging device:  
Three 1/4.7-inch type CCDs, 1,070,000 pixels (gross)  
Signal system:  
EIA standard, NTSC color system  
Horizontal resolution:  
530 TV lines  
Shutter speed:  
1/4 to 1/10,000 (s)  
White balance:  
ATW/One-push/Outdoor (5,800 K)/Indoor (3,200 K)  
Exposure:  
Auto/Manual  
Minimum illumination:  
7 lx  
Viewfinder:  
180,000-dot black and white LCD, Zebra pattern  
Built-in microphone:  
Stereo electret condenser microphone  
Built-in speaker:  
Dynamic speaker  
LCD:  
TFT active matrix, 3.5-inch type  
246,400 dots (1,120 x 220)

VTR PART

Tape speed:  
Approx. 28.2 mm/s (DVCAM mode),  
Approx. 18.8 mm/s (DV SP mode)  
Maximum recording time:  
40 minutes (DVCAM mode, with PDVM-40ME)  
60 minutes (DV SP mode, with PDVM-40ME)  
Video signal:  
EIA standard, NTSC color system  
Audio signal:  
REC: 48 kHz/16-bit, 32 kHz/12-bit  
PB: 48 kHz/16-bit, 32 kHz/12-bit, 32 kHz/16-bit, 44.1 kHz/16-bit

INPUT/OUTPUT connectors

Audio/Video input/output:  
AV mini jack (1)  
Video input/output:  
S-Video IN/OUT: Mini-DIN 4-pin (1)

Mic input:  
Stereo mini jack (1)  
Digital input/output:  
i.LINK(DV), IEEE1394, 4-pin (1)  
XLR Audio input:  
XLR 3-pin female (2) via adaptor  
LANC:  
Stereo mini-mini jack (1)  
Headphone:  
Stereo mini jack (1)  
External DC input:  
8.4V from AC-L10 AC adaptor

Memory Card Slot

Memory Stick  
Recording signals:  
Camera signal, VTR signal  
Image compression:  
JPEG, MPEG  
Image size:  
JPEG (640 x 480, 1152 x 864)  
MPEG (160 x 112, 320 x 240)

(\*) 35 mm equivalent

## DVCAM Camcorders

### DSR-PDX10P DVCAM Camcorder

#### Features

- Compact and lightweight: 1,050 g (2 lb 5 oz) with a battery and tape.
- Newly developed Mega Pixel 1/4.7-inch type 3-CCD camera system
- Switchable 4:3 and 16:9 image acquisition and recording modes
- Precision 16:9 technology and wider angel of view in 16:9 mode
- 14-bit DXP (Digital Extended Processor)
- Optical Super SteadyShot function
- Custom presets
- 12x optical zoom/ 24x/ 48x precision digital zoom
- Manual adjustment: exposure, shutter speed, white balance
- Program AE: soft portrait, sports lesson, beach and ski, sunset and moon, landscape
- Fader
- Zebra patterns (100% or 70%)
- Guide frame
- Index marking
- Date stamping (on to camera recording picture)
- Recording/playback of the DVCAM/DV (SP mode) format (\*1)\*Various interfaces: i.LINK interface, analog audio and video in/out (AV-mini, S-video), USB (Mini-B), headphone (stereo-mini), remote (LANC)
- XLR 2-ch audio adaptor for professional microphones
- USB streaming function
- 180,000-dot precision black and-white LCD monitor
- 3.5-inch(\*2) type 246,400-dot precision color LCD monitor
- Touch panel operation for adjusting frequently used camera functions
- InfoLITHIUM 'M series' battery system
- Still-Picture Recording (Progressive Shutter System)
- MPEG Movie Recording. Direct or from the DV/DVCAM tape.
- Digital program editing (\*3) allow auto assembly-like editing without an edit controller
- TC/User bit preset capability
- Audio dubbing (only for DVCAM recorded tape)
- Color Bar (BARS)
- Hour meter



DVCAM Camcorders

(\*1) The transition from cut to cut may not be smooth when recorded in DV (SP) format. In between scenes where the recording format is changed from DV to DVCAM, or vice versa, transition may not be smooth. This is a normal and expected phenomenon. Audio dubbing is not possible when recorded in DV (SP) format. (\*2) Viewable area measured diagonally. (\*3) Frame accuracy is not guaranteed.

#### Supplied Accessories

XLR adaptor (with a microphone holder) (1)  
 USB cable (1)  
 Image mixer for SONY/USB driver software  
 CD-RM (1)  
 ECM-NV1 (Monaural microphone) (1)  
 AC-L10 (AC adaptor) (1)  
 NP-FM50 (InfoLITHIUM rechargeable battery pack) (1)  
 RMT-811 (Remote commander and R6 batteries (x2) (1)  
 MSA-8A (IC recording media \*Memory Stick) (1)  
 Stereo AV cable (1)  
 Lens hood (1)  
 Wide lens hood (1)  
 Hood cap (1)  
 Carrying belt (1)

VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
 VCL-HG0737X Wide Conversion Lens  
 VF-R37K ND Filter Kit  
 HVL-FH1100 Flash  
 LCH-TRV950 Hard Carrying Case  
 AC-SQ950D AC Adaptor/Charger

#### Optional Accessories

ECM-670 Electret Condenser Microphone (E)  
 ECM-672 Electret Condenser Microphone (E)  
 SPK-DVF4 Sports Pack  
 CAC-12 Camera Microphone Holder  
 EC-0.3C2 Microphone cable  
 MSA-A \*Memory Stick\* IC Memory Media  
 VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)

DVCAM Camcorders

Specifications

GENERAL

Power requirements:  
DC 7.2 V (Battery), DC 8.4 V (AC Adaptor)  
Power consumption:  
5.0 W using the viewfinder /6.3 W using the LCD  
Operating temperature:  
0 °C to 40 °C (32 °F to 104 °F)  
Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)  
Dimensions (w x h x d):  
93 x 99 x 202 mm  
(3 3/4 x 4 x 8 inches)  
Mass:  
950 g (2 lb 1 oz) (camcorder only)

LENS PART

Zoom:  
12:1 variable speed zoom lens, f 3.6 to 43.2 mm, F 1.6 to 2.8  
Video (4:3): f 49 to 588 mm(\*)/(16:9): f 41 to 492 mm(\*), Still: f 41 to 492 mm(\*)  
Filter diameter:  
37 mm  
Focus:  
Auto/Manual (ring)/Infinity/One push auto

CAMERA PART

Imaging device:  
Three 1/4.7-inch type CCDs, 1,070,000 pixels (gross)  
Signal system:  
CCIR Standard, PAL color system  
Horizontal resolution:  
530 TV lines  
Shutter speed:  
1/3 to 1/10,000 (s)  
White balance:  
ATW/One-push/Outdoor (5,800 K)/Indoor (3,200 K)  
Exposure:  
Auto/Manual  
Minimum illumination:  
7 lx  
Viewfinder:  
180,000-dot black and white LCD, Zebra pattern  
Built-in microphone:  
Stereo electret condenser microphone  
Built-in speaker:  
Dynamic speaker  
LCD:  
TFT active matrix, 3.5-inch type  
246,400 dots (1,120 x 220)

VTR PART

Tape speed:  
Approx. 28.2 mm/s (DVCAM mode),  
Approx. 18.8 mm/s (DV SP mode)  
Maximum recording time:  
40 minutes (DVCAM mode, with PDVM-40ME)  
60 minutes (DV SP mode, with PDVM-40ME)  
Video signal:  
CCIR Standard, PAL color system  
Audio signal:  
REC: 48 kHz/16-bit, 32 kHz/12-bit  
PB: 48 kHz/16-bit, 32 kHz/12-bit, 32 kHz/16-bit, 44.1 kHz/16-bit

INPUT/OUTPUT connectors

Audio/Video input/output:  
AV mini jack (1)  
Video input/output:  
S-Video IN/OUT: Mini-DIN 4-pin (1)

Mic input:  
Stereo mini jack (1)  
Digital input/output:  
i.LINK(DV), IEEE1394, 4-pin (1)  
XLR Audio input:  
XLR 3-pin female (2) via adaptor  
LANC:  
Stereo mini-mini jack (1)  
Headphone:  
Stereo mini jack (1)  
External DC input:  
8.4V from AC-L10 AC adaptor

Memory Card Slot

Memory Stick  
Recording signals:  
Camera signal, VTR signal  
Image compression:  
JPEG, MPEG  
Image size:  
JPEG (640 x 480, 1152 x 864)  
MPEG (160 x 112, 320 x 240)

(\*) 35 mm equivalent

DVCAM Camcorders



DVCAM Camcorders

HDV Camcorders

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## HDV Camcorders

### HVR-Z1N HDV 1080i Camcorder

The HVR-Z1N is a compact and cost-effective HDV 1080i camcorder. (E32 (NTSC) area)

#### Features

- Adopts HDV 1080i specification of the HDV format that features 1080 effective scanning lines and 1440 horizontal pixels
- Compatible with existing DV tape and new high-grade mini cassette tape: DigitalMaster PHDVM-63DM
- Long recording time of 63 minutes with a mini cassette tape such as the DigitalMaster
- Three 1/3-inch(\*1) type 1080i HD CCDs with a 16:9 aspect ratio
- 14-bit HD DXP (Digital eXtended Processor)
- Optical 12x Carl Zeiss Vario -Sonnar T\* zoom lens
- Optical Super SteadyShot system
- HD Codec Engine to compress base band HD signal data at approx. 25 Mb/s with MPEG-2 compression
- Switchable recording and playback - HDV 1080i/DVCAM/DV (SP) and 60i/50i
- Down-conversion playback from 1080i down to 480i, 576i, 480p and 576p
- Aspect ratio conversion from 16:9 to 4:3
- 16:9 widescreen acquisition in DVCAM and DV formats
- i.LINK interface
- Built-in stereo microphone
- 2-channel independent audio record level control with audio level meter
- Long operating time: 360 minutes in HDV mode and 380 minutes in DVCAM/DV mode with the NP-F970 battery
- Supplied large, 16:9 widescreen color viewfinder
- 3.5-inch (\*1) type 16:9 widescreen color LCD monitor
- On-handle zoom lever and Rec Start/Stop button
- Variety of zoom operations with two zoom levers and a motorized zoom ring
- Six user assignable function-buttons
- AE (Auto Exposure) override function to manually change exposure settings during the AE mode
- Hyper gain function: max. 36 dB
- Marker display
- All scan mode to display all effective scanning lines in the screen
- AF (Auto Focus) assist function to manually change the AF reference focus positions
- Expanded focus function for easy confirmation of focus setting during manual focusing
- Peaking function to enhance the outline of the image in the viewfinder for easy manual focusing
- Time code preset
- External record control via an i.LINK interface
- Quick rec function to shorten the time until the recording starts from stop mode
- Status check function for easy confirmation of various parameters such as audio setup, output setup and assign button status
- Picture Profile function to offer six memory locations for storing important camera settings
- Personal menu function to allow the assignment of frequently used menu items for quick one button access
- Battery info function to display the battery charge level and remaining recording time
- Optimum weight distribution and balance
- Shot Transition function to offer automatic transition of various shooting parameters between shots
- Cinematone Gamma function for cinema-like recording
- Cineframe function for recording pictures in cinema-like picture movements
- Color correction feature for interesting in-camera effects
- (\*1) Viewable area measured diagonally



# HDV Camcorders

## Supplied Accessories

- AC-VQ850 AC adaptor/charger (1)
- Power cord (1)
- Connecting cord (1)
- Lens hood (1)
- Large eyecap (1)
- RMT-841 wireless Remote Commander (1)
- AV connecting cable (1)
- Compoent video cable (1)
- Shoe adaptor (1)
- NP-F570 InfoLITHIUM rechargeable battery pack (1)
- Size AA (R6) battery (2)
- Cleaning cassette (1)
- Shoulder trap (1)
- Operating instructions (1)

## Optional Accessories

- NP-F570 InfoLITHIUM Rechargeable Battery Pack
- NP-F770 InfoLITHIUM Rechargeable Battery Pack
- NP-F970 InfoLITHIUM Rechargeable Battery Pack
- 2NP-F970/B InfoLITHIUM Rechargeable (2) Battery Pack
- VCL-HG0872 Wide Conversion Lens
- VF-72CPK PL Filter Kit
- HVL-20DW2 Battery Video Light
- VCT-FXA Shoulder Brace
- VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)
- VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)
- LCS-VCB Soft Carrying Case
- LCR-FXA Rain Jacket
- LCH-FXA Hard Carrying Case
- ECM-678 Electret Condenser Microphone
- UWP-C1 UHF Synthesized Wireless Microphone Package (KR)

## Specifications

### Camera section

- Lens
  - Carl Zeiss Vario-Sonnar T\* zoom lens, 12x (optical)
  - f = 4. 5 to 54 mm
  - f = 32.5 to 390 mm (\*2) at 16:9 mode
  - f = 40 to 480 mm (\*2) at 4:3 mode
  - F = 1.6 to 2.8, filter diameter: 72 mm
- Built-in filter
  - 1/6 ND, 1/32 ND
- Focus
  - Auto, manual (focus ring/infinity position), one push auto
- Imaging device
  - 3-chip 1/3-inch type CCDs with a 16:9 aspect ratio
- Picture elements
  - Approx. 1,070,000 pixels (effective), approx. 1,120,000 pixels (total)
- White balance
  - Auto, one-push auto, indoor (3200 K), outdoor (5800 K ±7 steps)
- Shutter speed
  - 60i/NTSC mode
    - 1/4, 1/8, 1/15, 1/30, 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000 s
  - 50i/PAL mode
    - 1/3, 1/6, 1/12, 1/25, 1/50, 1/60, 1/100, 1/120, 1/150, 1/215, 1/300, 1/425, 1/600, 1/1000, 1/1250, 1/1750, 1/2500, 1/3500, 1/6000, 1/10000 s
- Exposure
  - Auto, manual
- Gain
  - 0, 3, 6, 9, 12, 15, 18 dB (adjustable for H, M and L gain positions)
- Minimum illumination
  - 3 lx with F1.6 at 18 dB
- VTR section
- Recording format
  - 1080/60i, 1080/50i, 480/60i (NTSC), 576/50i (PAL)
- Play out/Down conversion format
  - 1080/60i, 1080/50i, 480/60i (NTSC), 576/50i (PAL), 480/60p, 576/50p,
- Tape speed
  - HDV/DV SP
    - Max. 18.812 mm/s with PHDVM-63DM cassette
  - DVCAM
    - Max. 28.218 mm/s with PHDVM-63DM cassette
- Playback/Recording time
  - HDV/DV SP
    - Max. 63 min with PHDVM-63DM cassette
  - DVCAM
    - Max. 41 min with PHDVM-63DM cassette
- Fast forward/Rewind time
  - Approx. 2 min 40 s with PHDVM-63DM cassette

### Input/output connectors

- Audio/Video input/output
  - AUDIO/VIDEO jack x1
  - Video signal: 1 Vp-p, 75 Ω unbalanced, sync negative
  - Audio signal: 327 mV (at load impedance 47 kΩ), input impedance more than 47 kΩ, output impedance less than 2.2 kΩ
- S-video input/output
  - Mini-DIN 4-pin x 1
  - Y: 1 Vp-p, 75 Ω unbalanced, sync negative
  - C: 0.286 Vp-p (NTSC), 0.3 Vp-p (PAL), 75 Ω unbalanced
- Component video output
  - COMPONENT OUTPUT jack
  - Y: 1 Vp-p (0.3 V, sync negative)
  - Pr/Pb (Cr/Cb): 525 mVp-p (75% color bar, input impedance 75 Ω)
- i.LINK
  - 4-pin
- XLR audio input
  - XLR 3-pin female x 2, 327 mV, -60 dBu: 3 kΩ, +40 dBu: 10.8 kΩ, power supply: approx. 40 V
- Headphone
  - Stereo minijack (ø3.5 mm)
- LANC
  - Stereo mini-minijack (ø2.5 mm)
- Built-in input/output devices
- Color LCD viewfinder
  - 0.44-inch type, approx. 252,000 pixels (1120 x 225), hybrid type
- Color LCD monitor
  - 3.5-inch type, approx. 250,000 pixels (1120 x 224), hybrid type
- Microphone
  - Stereo type, noise reduction on/off
- General
- Mass
  - Approx. 2.1 kg (4 lb 10 oz) (camcorder only)
- Power requirements
  - DC 7.2 V (battery pack)
- Power consumption
  - HDV
    - Approx. 8.0 W (recording mode with LCD viewfinder on)
  - DVCAM/DV
    - Approx. 7.6 W (recording mode with LCD viewfinder on)
- Operating temperature
  - 0 to 40 °C (32 to 104 °K)
- Storage temperature
  - 20 to +60 °C (-4 to 140°K)
  - (\*2) These values are calculated to be equivalent to the 35 mm film.

## HDV Camcorders

### HVR-Z1P HDV 1080i Camcorder

The HVR-Z1P is a compact and cost-effective HDV 1080i camcorder. (E32 (PAL) area)

#### Features

- Adopts HDV 1080i specification of the HDV format that features 1080 effective scanning lines and 1440 horizontal pixels
- Compatible with existing DV tape and new high-grade mini cassette tape: DigitalMaster PHDVM-63DM
- Long recording time of 63 minutes with a mini cassette tape such as the DigitalMaster
- Three 1/3-inch(\*1) type 1080i HD CCDs with a 16:9 aspect ratio
- 14-bit HD DXP (Digital eXtended Processor)
- Optical 12x Carl Zeiss Vario -Sonnar T\* zoom lens
- Optical Super SteadyShot system
- HD Codec Engine to compress base band HD signal data at approx. 25 Mb/s with MPEG-2 compression
- Switchable recording and playback - HDV 1080i/DVCAM/DV (SP) and 60i/50i
- Down-conversion playback from 1080i down to 480i, 576i, 480p and 576p
- Aspect ratio conversion from 16:9 to 4:3
- 16:9 widescreen acquisition in DVCAM and DV formats
- i.LINK interface
- Built-in stereo microphone
- 2-channel independent audio record level control with audio level meter
- Long operating time: 360 minutes in HDV mode and 380 minutes in DVCAM/DV mode with the NP-F970 battery
- Supplied large, 16:9 widescreen color viewfinder
- 3.5-inch (\*1) type 16:9 widescreen color LCD monitor
- On-handle zoom lever and Rec Start/Stop button
- Variety of zoom operations with two zoom levers and a motorized zoom ring
- Six user assignable function-buttons
- AE (Auto Exposure) override function to manually change exposure settings during the AE mode
- Hyper gain function: max. 36 dB
- Marker display
- All scan mode to display all effective scanning lines in the screen
- AF (Auto Focus) assist function to manually change the AF reference focus positions
- Expanded focus function for easy confirmation of focus setting during manual focusing
- Peaking function to enhance the outline of the image in the viewfinder for easy manual focusing
- Time code preset
- External record control via an i.LINK interface
- Quick rec function to shorten the time until the recording starts from stop mode
- Status check function for easy confirmation of various parameters such as audio setup, output setup and assign button status
- Picture Profile function to offer six memory locations for storing important camera settings
- Personal menu function to allow the assignment of frequently used menu items for quick one button access
- Battery info function to display the battery charge level and remaining recording time
- Optimum weight distribution and balance
- Shot Transition function to offer automatic transition of various shooting parameters between shots
- Cinematone Gamma function for cinema-like recording
- Cineframe function for recording pictures in cinema-like picture movements
- Color correction feature for interesting in-camera effects
- (\*1) Viewable area measured diagonally



HDV Camcorders

Supplied Accessories

- AC-VQ850 AC adaptor/charger (1)
- Power cord (1)
- Connecting cord (1)
- Lens hood (1)
- Large eyecap (1)
- RMT-841 wireless Remote Commander (1)
- AV connecting cable (1)
- Compoent video cable (1)
- Shoe adaptor (1)
- NP-F570 InfoLITHIUM rechargeable battery pack (1)
- Size AA (R6) battery (2)
- Cleaning cassette (1)
- Shoulder trap (1)
- Operating instructions (1)

Optional Accessories

- NP-F570 InfoLITHIUM Rechargeable Battery Pack
- NP-F770 InfoLITHIUM Rechargeable Battery Pack
- NP-F970 InfoLITHIUM Rechargeable Battery Pack
- 2NP-F970/B InfoLITHIUM Rechargeable (2) Battery Pack
- VCL-HG0872 Wide Conversion Lens
- VF-72CPK PL Filter Kit
- HVL-20DW2 Battery Video Light
- VCT-FXA Shoulder Brace
- VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)
- VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)
- LCS-VCB Soft Carrying Case
- LCR-FXA Rain Jacket
- LCH-FXA Hard Carrying Case
- ECM-678 Electret Condenser Microphone

Specifications

Camera section

- Lens
  - Carl Zeiss Vario-Sonnar T\* zoom lens, 12x (optical)
  - f = 4. 5 to 54 mm
  - f = 32.5 to 390 mm (\*2) at 16:9 mode
  - f = 40 to 480 mm (\*2) at 4:3 mode
  - F = 1.6 to 2.8, filter diameter: 72 mm
- Built-in filter
  - 1/6 ND, 1/32 ND
- Focus
  - Auto, manual (focus ring/infinity position), one push auto
- Imaging device
  - 3-chip 1/3-inch type CCDs with a 16:9 aspect ratio
- Picture elements
  - Approx. 1,070,000 pixels (effective), approx. 1,120,000 pixels (total)
- White balance
  - Auto, one-push auto, indoor (3200 K), outdoor (5800 K±7 steps)
- Shutter speed
  - 60i/NTSC mode
    - 1/4, 1/8, 1/15, 1/30, 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000 s
  - 50i/PAL mode
    - 1/3, 1/6, 1/12, 1/25, 1/50, 1/60, 1/100, 1/120, 1/150, 1/215, 1/300, 1/425, 1/600, 1/1000, 1/1250, 1/1750, 1/2500, 1/3500, 1/6000, 1/10000 s
- Exposure
  - Auto, manual
- Gain
  - 0, 3, 6, 9, 12, 15, 18 dB (adjustable for H, M and L gain positions)
- Minimum illumination
  - 3 lx with F1.6 at 18 dB
- VTR section
- Recording format
  - 1080/60i, 1080/50i, 480/60i (NTSC), 576/50i (PAL)
- Play out/Down conversion format
  - 1080/60i, 1080/50i, 480/60i (NTSC), 576/50i (PAL), 480/60p, 576/50p,
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  - Audio signal: 327 mV (at load impedance 47 kΩ), input impedance more than 47 kΩ, output impedance less than 2.2 kΩ
- S-video input/output
  - Mini-DIN 4-pin x 1
  - Y: 1 Vp-p, 75 Ω unbalanced, sync negative
  - C: 0.286 Vp-p (NTSC), 0.3 Vp-p (PAL), 75 Ω unbalanced
- Component video output
  - COMPONENT OUTPUT jack
  - Y: 1 Vp-p (0.3 V, sync negative)
  - Pr/Pb (Cr/Cb): 525 mVp-p (75% color bar, input impedance 75 Ω)
- i.LINK
  - 4-pin
- XLR audio input
  - XLR 3-pin female x 2, 327 mV, -60 dBu: 3 kΩ, +40 dBu: 10.8 kΩ, power supply: approx. 40 V
- Headphone
  - Stereo minijack (ø3.5 mm)
- LANC
  - Stereo mini-minijack (ø2.5 mm)
- Built-in input/output devices
- Color LCD viewfinder
  - 0.44-inch type, approx. 252,000 pixels (1120 x 225), hybrid type
- Color LCD monitor
  - 3.5-inch type, approx. 250,000 pixels (1120 x 224), hybrid type
- Microphone
  - Stereo type, noise reduction on/off
- General
- Mass
  - Approx. 2.1 kg (4 lb 10 oz) (camcorder only)
- Power requirements
  - DC 7.2 V (battery pack)
- Power consumption
  - HDV
    - Approx. 8.0 W (recording mode with LCD viewfinder on)
  - DVCAM/DV
    - Approx. 7.6 W (recording mode with LCD viewfinder on)
- Operating temperature
  - 0 to 40 °C (32 to 104 °K)
- Storage temperature
  - 20 to +60 °C (-4 to 140°K)
  - (\*2) These values are calculated to be equivalent to the 35 mm film.

HDV Camcorders



HDV Camcorders

## Camcorder Accessories/Peripherals

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## Camcorder Accessories/Peripherals

### AC-550 AC Adaptor

#### Features

- Supplies DC power to a Sony portable camera and portable VTR through the 26-pin (CCZ-type) camera connector or XLR-4-pin DC OUT connector

#### Supplied Accessories

AC power cord (1)  
DC power cord (1)  
Operation and Maintenance manual (1)

#### Optional Accessories

CCZ cables 26-pin/26-pin Camera Cable

#### Specifications

##### Power requirements:

AC 110 to 120 V/220 to 240 V  $\pm 10\%$   
selectable, 60 Hz

##### Power consumption:

Max. 130 W

##### DC output:

13.5 V, 7 A

##### Input/output connectors:

CAMERA: CCZ-type 26-pin  
VIDEO OUT: BNC type  
MIC OUT: Equivalent to XLR-3-31  
DC OUT: Equivalent to XLR-4-31  
EXT VBS: BNC type

##### Dimensions (W x H x D):

217 x 91 x 327 mm  
(8 5/8 x 3 5/8 x 12 7/8 inches)

##### Mass:

3.8 kg (8 lb 6 oz)



### AC-550CE AC Adaptor

#### Features

- Supplies DC power to a Sony portable camera and portable VTR through the 26-pin (CCZ-type) camera connector or XLR-4-pin DC OUT connector

#### Supplied Accessories

AC power cord (1)  
DC power cord (1)  
Operation and Maintenance manual (1)

#### Optional Accessories

CCZ cables 26-pin/26-pin Camera Cable

#### Specifications

##### Power requirements:

AC 110 to 120 V/220 to 240 V  $\pm 10\%$   
selectable, 50Hz

##### Power consumption:

Max. 130 W

##### DC output:

13.5 V, 7 A

##### Input/output connectors:

CAMERA: CCZ-type 26-pin  
VIDEO OUT: BNC type  
MIC OUT: Equivalent to XLR-3-31  
DC OUT: Equivalent to XLR-4-31  
EXT VBS: BNC type

##### Dimensions (W x H x D):

217 x 91 x 327 mm  
(8 5/8 x 3 5/8 x 12 7/8 inches)

##### Mass:

3.8 kg (8 lb 6 oz)



Camcorder Accessories/Peripherals

AC-DN1 AC Adaptor

Features

●Compact and lightweight AC adaptor ●Maximum 38 W DC power supply ●V-mount mechanism for direct attachment to compatible camcorders ●Up to 85% charging capability of Sony V-mount lithium-ion batteries (BP-GL95/GL65/IL75/L40A/L60A/L90A/L60S)

Supplied Accessories

DC power cord (1)  
BKW-L601 Battery Adaptor (1)

Specifications

Power requirements:  
AC 100 V to 240 V  
Power consumption:  
50 W (90 VA) or less  
Power output (DC):  
38 W  
Voltage output (DC):  
16.7 V  
Mass:  
660 g (1 lb 7 oz)  
Dimensions (W x H x D):  
112 x 169 x 38 mm  
(4 1/2 x 6 3/4 x 1 1/2 inches)



AC-DN10 AC Adaptor/Charger

Features

●Compact and lightweight AC adaptor/charger ●Maximum 100 W DC power supply ●V-mount mechanism for direct attachment to compatible camcorders ●XLR-4-pin output to power other equipment ●Charging capability of Sony V-mount lithium-ion batteries (BP-GL95/GL65/IL75/L40A/L60A/L90A/L60S) ●Quick charging - A BP-GL95 can be fully charged within 145 minutes ●Can charge batteries while supplying AC power to other equipment



Supplied Accessories

Operation manual (1)  
AC power cord (1)

Specifications

Power requirements:  
AC 100 to 240 V, 50/60 Hz  
DC output:  
16.8 V, 6 A  
Operating temperature:  
0 to +45 °C (32 to 113 °F)

Mass:  
Approx. 850 g (1 lb 13 oz)  
Dimensions (W x H x D):  
101 x 169 x 48 mm  
(4 x 6 3/4 x 1 15/16 inches)  
Charging time  
BP-GL95:  
145 minutes  
BP-GL65:  
155 minutes

BP-L60S:  
155 minutes

## Camcorder Accessories/Peripherals

### AC-DN2B AC Adaptor

#### Features

●Compact and lightweight AC adaptor/charger ●Maximum 150 W DC power supply ●V-mount mechanism for direct attachment to compatible camcorders ●XLR-4-pin output to power other equipment ●Up to 85% charging capability of Sony V-mount lithium-ion batteries (BP-GL95/GL65/IL75/L40A/L60A/L90A/L60S)



#### Supplied Accessories

DC power cord (1)  
Operation manual (1)

#### Optional Accessories

CCDD-X2 4-pin/4-pin DC Power Cord for  
Portable Video Equipment  
BKW-L601 Battery Adaptor

#### Specifications

Power requirements:

AC 100 to 240 V

Rated power output (DC):

150 W

Voltage output (DC):

16.7 V

Current output (DC):

9 A (on regulation)

Mass:

Approx. 950 g (2 lb 2 oz)

Dimensions (W x H x D):

101 x 169 x 70 mm

(4 x 6 3/4 x 2 7/8 inches)

Charging time

BP-GL95:

155 minutes (to about 85% capacity)

BP-GL65:

100 minutes (to about 85% capacity)

BP-L60S:

100 minutes (to about 85% capacity)

### BC-V500 Battery Charger

#### Battery Charger

#### Features

●Compact battery charger for the NP-F530/F730/F930, etc. ●Two batteries can be charged at the same time

#### Specifications

Dimensions:

45(W) x 98(H) x 50(D) mm

Mass:

Approx. 120 g

Power requirements:

AC100 to 240V, 50/60Hz

Output:

DC 8.4V/0.6A

### BC-V615 Battery Charger

#### Battery charger

## Camcorder Accessories/Peripherals

### AC-SQ950D AC Adaptor/Charger

#### Features

- Can be used as a DC adaptor for the DSR-PDX10/PDX10P ●Battery charger for InfoLITHIUM M series battery. (NP-QM91D)

#### Applicable Models

DSR-PDX10 DVCAM Camcorder  
DSR-PDX10P DVCAM Camcorder

#### Supplied Accessories

Operation manual (1)  
AC power cord (1)  
Car battery cord (DCC-VQ1) (1)  
Connecting cord (DK-215) (1)

#### Specifications

##### Dimensions:

W 123 x H 48 x D 135 mm (4 7/8 x 1 15/16  
x 5 3/8 inches)

##### Mass:

390 g (13.8 oz)

##### AC power requirement:

AC 100 V to 240 V, 50 Hz/60 Hz

##### DC power requirement:

12/24 V

##### Power consumption:

35 W

##### Operating Temperature:

0°C to 40°C (32°F to 104°F)

##### Storage Temperature:

-20°C to 60°C (-4°F to +140°F)



### BC-L70 Li-ion Battery Charger

The BC-L70 is a compact and lightweight two-channel charger for the BP-GL/IL/L Series lithium-ion batteries.

#### Features

- Can charge Sony V-mount type lithium-ion batteries: BP-GL95/GL65/L60S/IL75/L40A/L90A/L60A ●Up to two battery packs can be charged simultaneously ●Quick and efficient charging ●One BP-GL95 battery can be fully charged within 145 minutes ●Two BP-GL95 batteries can be fully charged within 220 minutes ●Max. 100 W DC power supply (XLR-4-pin)



#### Supplied Accessories

AC power cord (1)  
Plug holder (1)

#### Optional Accessories

BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L40A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack

#### Specifications

##### Power requirements:

AC 100 to 240 V, 50/60 Hz

##### Power consumption:

Less than 168 VA

##### DC output:

Max. 16.8 V, 6 A

##### Operating temperature

0 to 45 °C (32 to 113 °F)

##### Dimensions (W x H x D):

60 x 237 x 134 mm (2 3/8 x 9 3/8 x 5 3/8  
inches)

#### Mass:

Approx. 1.2 kg (2 lb 10 oz)

#### Charging time

##### For one battery

BP-GL95: 145 minutes  
BP-GL65: 155 minutes  
BP-L60S: 150 minutes

##### For two batteries

BP-GL95: 220 minutes  
BP-GL65: 170 minutes  
BP-L60S: 170 minutes

## Camcorder Accessories/Peripherals

# BC-M150 Ni-MH & Li-ion Battery Charger

### Features

- Battery charger for BP-L/IL/GL Series lithium-ion battery packs and BP-M100/M50 nickel metal hydride battery packs
- Up to four battery packs can be charged
- LED indicators to indicate charging status, and discharge ('refresh') status of a nickel metal hydride battery
- LCD screen to indicate information of connected batteries such as battery reserve, charge time for full charge, charge/discharge cycles (\*1)
- DC power output to an external device via the XLR 4-pin connector

(\*1) The BC-M150 indicates the battery reserve only when charging the BP-IL75/GL65/GL95/M50/M100 batteries.

### Supplied Accessories

AC power cord (1)

Plug holder (1)

### Optional Accessories

CCDD-X2 4-pin/4-pin DC Power Cord for Portable Video Equipment

BP-GL65 Rechargeable Lithium-ion Battery Pack

BP-GL95 Rechargeable Lithium-ion Battery Pack

BP-IL75 Rechargeable Lithium-ion Battery Pack

BP-L60A Rechargeable Lithium-ion Battery Pack

BP-L40A Rechargeable Lithium-ion Battery Pack

BP-L90A Rechargeable Lithium-ion Battery Pack

BP-M50 Rechargeable Nickel Metal Hydride Battery Pack

BP-M100 Rechargeable Nickel Metal Hydride Battery Pack

### Specifications

Power requirements:

AC 120 to 240 V, 50/60 Hz

Power consumption:

Approx. 160 W

Output:

DC 16.8 V, 6 A (to the lithium-ion battery pack or an external device via the XLR 4-pin)

DC 19.5 V, 5 A (to the nickel metal hydride battery pack)

Charging time:

For one battery

BP-GL95: 145 min

BP-GL65: 155 min

BP-L60S: 155 min

BP-IL75: 140 min

BP-M50: 70 min

BP-M100: 100 min

For four batteries

BP-GL95: 345 min

BP-GL65: 365 min

BP-L60S: 365 min

BP-IL75: 340 min

BP-M50: 280 min

BP-M100: 400 min

Operating temperature:

0 to +40°C (+32 to +104°F)

Storage temperature:

-20 to +60°C (-4 to +140°F)

Operating/storage humidity:

20% to 90% RH

Mass:

3.5 kg (7 lb 11 oz)

Dimensions: (W × H × D)

155 × 120 × 330 mm

(6 1/8 × 4 3/4 × 13 inches)



## Camcorder Accessories/Peripherals

# BC-M50 Ni-MH & Li-ion Battery Charger

### Features

- Compact and mobile battery charger for Sony lithium-ion and nickel metal hydride battery packs
- Up to two batteries can be attached
- Continuously charges two battery packs
- Fully discharge a nickel metal hydride battery pack before charging to avoid memory effect
- Charge progress indicator

### Supplied Accessories

Operating Instructions (1)

Warranty card (1)

### Optional Accessories

BP-GL65 Rechargeable Lithium-ion Battery Pack

BP-GL95 Rechargeable Lithium-ion Battery Pack

BP-IL75 Rechargeable Lithium-ion Battery Pack

BP-L40A Rechargeable Lithium-ion Battery Pack

BP-L60A Rechargeable Lithium-ion Battery Pack

BP-L90A Rechargeable Lithium-ion Battery Pack

BP-L60S Rechargeable Lithium-ion Battery Pack

BP-M50 Rechargeable Nickel Metal Hydride Battery Pack

BP-M100 Rechargeable Nickel Metal Hydride Battery Pack

### Specifications

Power requirements:

120 V, 60 Hz (for USA and Canada)

100 to 240 V, 50/60 Hz (except for USA and Canada)

Output:

16.8 V DC, 2.2 A (for charging the lithium-ion battery pack)

20 V DC, 1.8 A (for charging the nickel metal hydride battery pack)

Power consumption:

49 W

Operating temperature:

0 to +40°C (32 to 104°F)

Storage temperature:

-20 to +60°C (-4 to 140°F)

Dimensions (W x H x D):

60 x 191 x 130 mm

(2 3/8 x 7 5/8 x 5 1/8 inches)

Mass:

1.1 kg (2 lb 6 oz)

Charge system:

Constant voltage and current charge system with timer stop system

Charge control system:

Constant voltage and current charge control system



## Camcorder Accessories/Peripherals

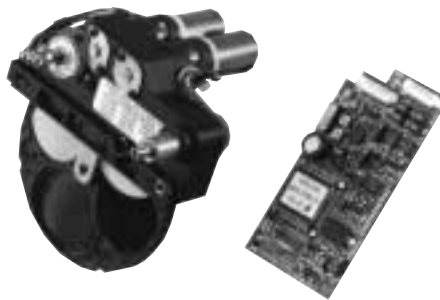
### BKDW-701 Servo Filter Unit

#### Features

- Controls servo filter wheels.

#### Applicable Models

DVW-707P Digital Betacam Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-709WSP Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WSP Digital Betacam 16:9/4:3  
 Switchable Camcorder

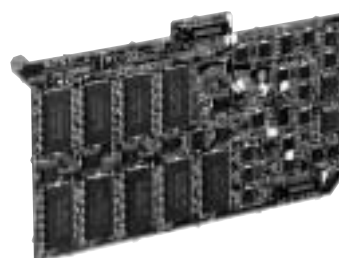


### BKDW-703 Picture Cache Board

Picture cache board for Digital Betacam camcorders

#### Applicable Models

DVW-707P Digital Betacam Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-709WSP Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WSP Digital Betacam 16:9/4:3  
 Switchable Camcorder



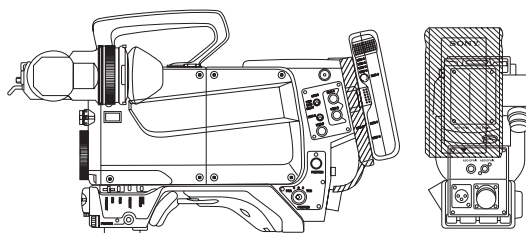
### BKP-L551 Li-ion Battery Adaptor

#### Features

- With the BKP-L551, the BP-GL/IL/L/M series battery can be used with the CA-550/57A/55A/50A/3A/550P/57AP/50AP ●The BKP-L551 can be directly attached to the rear part of the CAs by using screws or through a battery table assembly

#### Applicable Models

DNW-A28 Betacam SX Recorder  
 DNW-A28P Betacam SX Recorder  
 HDC-930 Multi-format HD Camera  
 HDC-950 Multi-format HD Camera  
 HDC-F950 Digital 4:4:4 HD Camera System  
 HDW-S280 HDCAM Compact Recorder  
 PDW-D1 XDCAM Drive Unit



## Camcorder Accessories/Peripherals

### BKW-401 Viewfinder Rotation Bracket

#### Features

- Viewfinder rotation bracket

#### Applicable Models

DNW-7 Betacam SX Camcorder  
DNW-7P Betacam SX Camcorder  
DNW-90WS Betacam SX Camcorder  
DNW-90WSP Betacam SX Camcorder  
DNW-9WS Betacam SX Camcorder  
DNW-9WSP Betacam SX Camcorder  
DVW-970 Digital Betacam Camcorder  
DVW-970P Digital Betacam Camcorder  
HDW-730S HDCAM Camcorder  
HDW-750 HDCAM Camcorder  
HDW-750P HDCAM Camcorder  
MSW-970 MPEG IMX camcorder  
MSW-970P MPEG IMX camcorder PAL model  
PDW-510 XDCAM Camcorder (DVCAM Recording)  
PDW-510P XDCAM Camcorder (DVCAM Recording)  
PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)



### BKW-L601 Battery Adaptor

#### Features

- Enables non V-mount camcorders to mount Sony V-mount batteries ●V-shoe attachment for quick and easy battery change

#### Specifications

Dimensions (W x H x D):

89 x 141.4 x 14.2 mm

(3 5/8 x 5 5/8 x 9/16 inches)

Mass:

110 g (4 oz)



## Camcorder Accessories/Peripherals

### BP-GL65 Rechargeable Lithium-ion Battery Pack

#### Features

- Intelligent "INFO" battery that communicates digitally with Sony camcorders
- Remaining capacity indication on viewfinder of the compatible Sony camcorders
- V-mount attaching mechanism for quick and easy battery change
- Four-step green LED indicators for quick visual verification of the battery remaining capacity (more than 80%, 60%, 40%, 20%)
- Four-step orange LED indicators for quick visual check of battery remaining capacity (below 20%, 15%, 10%, 5%)

#### Supplied Accessories

Operation manual (1)

#### Specifications

Type of battery:

Rechargeable lithium-ion battery

Maximum voltage:

16.8 V

Nominal voltage:

14.4 V

Cell capacity:

65 Wh

Operating temperature (for discharge):

-10°C to +45°C (+14°F to +113°F)

Dimensions (W x H x D):

92 x 138 x 41 mm (3 5/8 x 5 1/2 x 1 5/8 inches)

Mass:

Approx. 550 g (1 lb 3 oz)

Eco-info:

Lead-free solder is used for soldering.

Halogenated flame retardants are not used in the cabinets and the printed wiring boards.



### BP-GL95 Rechargeable Lithium-ion Battery Pack

#### Features

- Intelligent "INFO" battery that communicates digitally with Sony camcorders
- Remaining capacity indication on viewfinder of the compatible Sony camcorders
- V-mount attaching mechanism for quick and easy battery change
- Four-step green LED indicators for quick visual verification of the battery remaining capacity (more than 80%, 60%, 40%, 20%)
- Four-step orange LED indicators for quick visual check of battery remaining capacity (below 20%, 15%, 10%, 5%)

#### Supplied Accessories

Operation manual (1)

#### Specifications

Type of battery:

Rechargeable lithium-ion battery

Maximum voltage:

16.8 V

Nominal voltage:

14.4 V

Cell capacity:

95 Wh

Operating temperature (for discharge):

-20°C to +45°C (-4°F to +113°F)

Dimensions (W x H x D):

92 x 138 x 41 mm (3 5/8 x 5 1/2 x 1 5/8 inches)

Mass:

760 g (1 lb 10 oz)

Eco-info:

Lead-free solder is used for soldering.

Halogenated flame retardants are not used in the cabinets and the printed wiring boards.



## Camcorder Accessories/Peripherals

### BP-IL75 Rechargeable Lithium-ion Battery Pack

#### Features

- Intelligent "INFO" battery that communicates digitally with Sony camcorders
- Remaining capacity indication on viewfinder of the compatible Sony camcorders
- V-mount attaching mechanism for quick and easy battery change
- Four-step green LED indicators for quick visual verification of the battery remaining capacity (more than 80%, 60%, 40%, 20%)

#### Specifications

Type of battery:

Rechargeable lithium-ion battery

Maximum voltage:

16.8 V

Nominal voltage:

14.4 V

Cell capacity:

77.8 Wh

Current capacity:

5.4 Ah

Operating temperature (for discharge):

-20°C to +45°C (-4°F to +113°F)

Dimensions (W x H x D):

101.0 x 168.7 x 37.0 mm

Mass:

900 g (1 lb 15 oz)



### BP-L40A Rechargeable Lithium-ion Battery Pack

#### Features

- High capacity lithium-ion battery
- No "Memory Effect"
- Built-in LED capacity indicator for a quick visual check of the remaining charge
- V-shoe attachment for quick and easy battery change

#### Specifications

Type of battery:

Lithium-ion rechargeable

Maximum voltage:

16.8V

Nominal voltage:

14.4V

Current capacity:

43.2Wh

Operating temperature:

-10°C to +45°C (-4°F to +113°F)

Dimensions (W x H x D):

92 x 138 x 42 mm (3 5/8 x 5 1/2 x 1 11/16 inches)

Mass:

530g (1 lb 18 oz)



## Camcorder Accessories/Peripherals

### BP-L60S Rechargeable Lithium-ion Battery Pack

#### Features

- High capacity lithium-ion battery (64.8 Wh) ●Four-step LED display indicates remaining capacity in 20% steps
- V-mount attaching mechanism for quick and easy battery change ●Eliminates the “Memory Effect”

#### Supplied Accessories

Operation manual (1)

#### Specifications

Type of battery:

Rechargeable lithium-ion battery

Maximum voltage:

16.8 V

Nominal voltage:

14.4 V

Capacity:

64.8 Wh

Operating temperature:

-20 to +45 °C (-4 to +113 °F)

Dimensions (W x H x D):

101 x 168.7 x 37 mm (4 x 6 3/4 x 1 1/2 inches)

Mass:

Approx. 800 g (1 lb 12 oz)



### BP-M50 Rechargeable Nickel Metal Hydride Battery Pack

#### Features

- High capacity nickel metal hydride battery ●Built-in LED capacity indicator for a quick visual check of the remaining charge ●V-shoe attachment for quick and easy battery change

#### Optional Accessories

BC-M50 Ni-MH & Li-ion Battery Charger

BC-M150 Ni-MH & Li-ion Battery Charger

#### Specifications

Type of battery:

Nickel metal hydride rechargeable

Maximum voltage:

15.6 V DC

Normal voltage:

13.2 V DC

Capacity:

49 Wh

Operating temperature:

-10°C to -45°C (14°F to 113°F)

Dimensions (W x H x D):

101 x 37 x 169 mm  
(4 x 1 1/2 x 6 5/8 inches)

Mass:

830 g (1lb 13oz)



## Camcorder Accessories/Peripherals

### BP-M100 Rechargeable Nickel Metal Hydride Battery Pack

#### Features

●High capacity nickel metal hydride battery ●Built-in LED capacity indicator for a quick visual check of the remaining charge ●V-shoe attachment for quick and easy battery change

#### Optional Accessories

BC-M50 Ni-MH & Li-ion Battery Charger

BC-M150 Ni-MH & Li-ion Battery Charger

#### Specifications

Type of battery:

Nickel metal hydride rechargeable

Maximum voltage:

15.6 V DC

Normal voltage:

13.2 V DC

Capacity:

98 Wh

Operating temperature:

-10°C to -45°C (14°F to 113°F)

Dimensions (W x H x D):

101 x 60 x 169 mm

(4 x 2 3/8 x 6 5/8 inches)

Mass:

1540 g (3 lb 6 oz)



### BSC-1-PACK Setup Card

#### Features

●Package of four setup cards and soft case.

#### Applicable Models

DNW-7 Betacam SX Camcorder

DNW-7P Betacam SX Camcorder

DNW-90WS Betacam SX Camcorder

DNW-90WSP Betacam SX Camcorder

DNW-9WS Betacam SX Camcorder

DNW-9WSP Betacam SX Camcorder

DVW-707P Digital Betacam Camcorder

DVW-709WS Digital Betacam 16:9/4:3

Switchable Camcorder

DVW-709WSP Digital Betacam 16:9/4:3

Switchable Camcorder

DVW-790WS Digital Betacam 16:9/4:3

Switchable Camcorder

DVW-790WSP Digital Betacam 16:9/4:3

Switchable Camcorder



## Camcorder Accessories/Peripherals

### BVF-V10 1.5-inch Type B/W Viewfinder (EIA)

#### Features

- 1.5-inch 4:3 standard B/W CRT viewfinder for camcorders
- High resolution of 600 TV lines
- The eye-piece is removable from the viewfinder to allow direct view of the CRT



#### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 PDW-510 XDCAM Camcorder (DVCAM Recording)

#### Supplied Accessories

Operation manual (1)

#### Specifications

##### General

Power requirements:  
 DC 9.3 V  
 Power consumption:  
 1.6 W  
 Operating temperature:  
 -20 to +45°C (-45 to +113°F)

#### Storage temperature:

-20 to +60°C (-4 to +140°F)

#### External dimensions (W x H x D):

229 x 76 x 215 mm  
 (9 1/8 x 3 x 8 1/2 inches)

#### Mass:

530 g (1 lb 3 oz)

#### Performance

##### CRT:

1.5-inch monochrome

##### Horizontal resolution:

600 TV lines (center)

##### Signal system:

EIA standards

##### Indicators:

REC/TALLY, BATT

### BVF-V10CE 1.5-inch Type B/W Viewfinder (CCIR)

#### Features

- 1.5-inch type 4:3 standard B/W CRT viewfinder for camcorders
- High resolution of 600 TV lines
- The eye-piece is removable from the viewfinder to allow direct view of the CRT



#### Applicable Models

DNW-7P Betacam SX Camcorder  
 DNW-90WSP Betacam SX Camcorder  
 DNW-9WSP Betacam SX Camcorder  
 DVW-707P Digital Betacam Camcorder  
 DVW-709WSP Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WSP Digital Betacam 16:9/4:3 Switchable Camcorder  
 PDW-510P XDCAM Camcorder (DVCAM Recording)  
 PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)

#### Supplied Accessories

Operation manual (1)

#### Specifications

##### General

Power requirements:  
 DC 9.3 V  
 Power consumption:  
 1.6 W  
 Operating temperature:  
 -20 to +45°C (-45 to +113°F)  
 Storage temperature:  
 -20 to +60°C (-4 to +140°F)  
 External dimensions (W x H x D):  
 229 x 76 x 215 mm  
 (9 1/8 x 3 x 8 1/2 inches)

#### Mass:

530 g (1 lb 3 oz)

#### Performance

##### CRT:

1.5-inch monochrome

##### Horizontal resolution:

600 TV lines (center)

#### Signal system:

CCIR standards

#### Indicators:

REC/TALLY, BATT

## Camcorder Accessories/Peripherals

### CA-701 Camcorder Adaptor

#### Features

- Four-channel audio recording capability
- Access to audio channels 3 and 4 via connectors (XLR × 2)
- Microphone phantom power
- Independent input level control and metering for channel 3 and 4
- Two SDI output (BNC × 2)
- Compact and lightweight with low power consumption
- Versatile audio monitoring
- Direct connection to the camcorder via a 40-pin connector
- Can be used with the BVF-55/55CE 5-inch type monochrome viewfinder
- Flexible choice of power supply



#### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-7P Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-90WSP Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DNW-9WSP Betacam SX Camcorder  
 DVW-707P Digital Betacam Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-709WSP Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WSP Digital Betacam 16:9/4:3 Switchable Camcorder  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-510P XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)

#### Supplied Accessories

Operation manual (1)  
 Maintenance manual (1)

#### Optional Accessories

BP-L60A Rechargeable Lithium-ion Battery Pack  
 BP-L90A Rechargeable Lithium-ion Battery Pack  
 WRR-860A UHF Synthesized Diversity Tuner (68U)  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack

WRR-860A UHF Synthesized Diversity Tuner (68CA)  
 WRR-860A UHF Synthesized Diversity Tuner (AU)  
 AC-550 AC Adaptor  
 AC-550CE AC Adaptor  
 BVF-55 5-inch Type B/W Viewfinder (EIA)  
 BVF-55CE 5-inch Type B/W Viewfinder (CCIR)

#### Specifications

##### General

Power requirements:  
 DC 12 V + 5.0/-1.0 V  
 Power consumption:  
 7 W  
 Operating temperature:  
 0 to +40°C (+32 to +104°F)  
 Storage temperature:  
 -20 to +60°C (-4 to +104°F)  
 Humidity:  
 25 to 85%(relative humidity)  
 Mass:  
 1.0 kg (2 lb 3 oz)

##### Input/output connectors

Audio input CH-3/4:  
 XLR-3-31 type (2, female)  
 (-60 dBu/+4 dBu, 0 dBu=0.775 Vrms)  
 Audio output:  
 XLR-5-pin type, male (stereo)  
 DC input:  
 XLR-4-pin type, male, 11 to 17 V  
 DC output:  
 4-pin, 11 to 17 V, maximum current 0.1 A  
 SDI output:  
 BNC type (2), 0.8 Vp-p, 75 Ω  
 Camera:  
 40-pin

## Camcorder Accessories/Peripherals

### CA-755 Camcorder Adaptor

#### Features

- Provides an interface with the Sony camera command system to enable high-speed, real-time control and instant tactile response
- Furnished with a triax cable interface for use with the CCU-550D/700A series camera control unit
- High picture quality
- Direct connection with the camcorder via a 40-pin connector
- Long signal transmission capability of up to 600 m of  $\phi 8.5$  mm and 1200m of  $\phi 14.5$  mm triax cable
- Can be used with the BVF-55 5-inch type monochrome viewfinder
- Compact and lightweight of 1.9 kg (4 lb 3 oz)

#### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DVW-707P Digital Betacam Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-709WSP Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WSP Digital Betacam 16:9/4:3  
 Switchable Camcorder

#### Supplied Accessories

Operation manual (1)  
 Maintenance manual (1)  
 Cable clamp (1)  
 M3 screws for cable clamp (2)  
 M4 screws for cable clamp (2)

#### Specifications

##### General

Power consumption:

13 W

Mass:

1.9 kg (4 lb 3 oz)

##### Input/output connectors

DC input:

XLR-4-pin type, 11.5 to 17 V

Return output:

BNC, 1.0 Vp-p, 75  $\Omega$

Return control:

6-pin

Earphone:

Mini jack, 8  $\Omega$

Camera:

40-pin

CCU:

Kings type

INCOM/PGM:

Headset XLR-5-pin type



## Camcorder Accessories/Peripherals

### CA-755P Camcorder Adaptor

#### Features

- Provides an interface with the Sony camera command system to enable high-speed, real-time control and instant tactile response
- Furnished with a triax cable interface for use with the CCU-550D/700A series camera control unit
- High picture quality
- Direct connection with the camcorder via a 40-pin connector
- Long signal transmission capability of up to 600 m of  $\phi 8.5$  mm and 1200 m of  $\phi 14.5$  mm triax cable
- Can be used with the BVF-55CE 5-inch type monochrome viewfinder
- Compact and lightweight of 1.9 kg (4 lb 3 oz)

#### Applicable Models

DNW-7P Betacam SX Camcorder  
 DNW-90WSP Betacam SX Camcorder  
 DNW-9WSP Betacam SX Camcorder  
 DVW-707P Digital Betacam Camcorder  
 DVW-709WSP Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WSP Digital Betacam 16:9/4:3 Switchable Camcorder

#### Supplied Accessories

Operation manual (1)  
 Maintenance manual (1)  
 Cable clamp (1)  
 M3 screws for cable clamp (2)  
 M4 screws for cable clamp (2)

#### Specifications

##### General

Power consumption:

13 W

Mass:

1.9 kg (4 lb 3 oz)

##### Input/output connectors

DC input:

XLR-4-pin type, 11.5 to 17 V

Return output:

BNC-type, 1.0 Vp-p, 75  $\Omega$

Return control:

6-pin

Earphone:

Mini jack, 8  $\Omega$

Camera:

40-pin

CCU:

Kings type

INCOM/PGM:

Headset XLR-5-pin type



## Camcorder Accessories/Peripherals

### CBK-FC01 Pull-down (24P shooting) Board

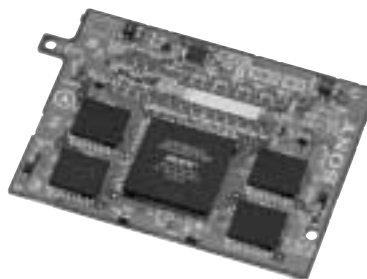
#### Features

- Provides progressive modes of 23.976P to offer a film-like effect

\*Recording to disc is in 59.94i via 2-3 pull-down.

#### Applicable Models

DVW-970 Digital Betacam Camcorder  
MSW-970 MPEG IMX camcorder  
PDW-510 XDCAM Camcorder (DVCAM Recording)  
PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)



### CBK-MB01 Picture Cache Board

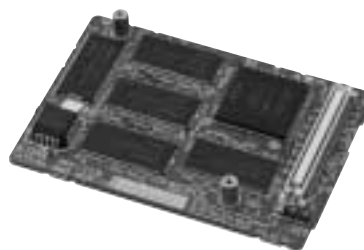
The CBK-MB01 is a picture cache board for the DVW-970/970P Digital Betacam Camcorder.

#### Features

- Up to eight seconds of video signal can be recorded before the REC button is pressed
- Allows recordings to be made over long time periods

#### Applicable Models

DVW-970 Digital Betacam Camcorder  
DVW-970P Digital Betacam Camcorder



### CBK-NC01 Ethernet (100Base-TX) Adaptor

#### Features

- Allows PDW-530/530P//510/510P camcorders to connect with an Ethernet network

#### Applicable Models

PDW-510 XDCAM Camcorder (DVCAM Recording)  
PDW-510P XDCAM Camcorder (DVCAM Recording)  
PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)



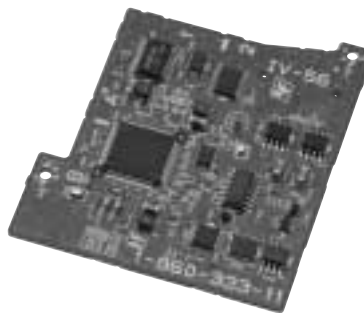
## Camcorder Accessories/Peripherals

### CBK-SC01 Analog Composite Input Board

Analog composite input board

#### Applicable Models

DSR-400K DVCAM Camcorder  
DSR-400L DVCAM Camcorder  
DSR-400PK DVCAM Camcorder  
DSR-400PL DVCAM Camcorder  
DSR-450WSL DVCAM Camcorder  
DSR-450WSPL DVCAM Camcorder  
PDW-510 XDCAM Camcorder (DVCAM Recording)  
PDW-510P XDCAM Camcorder (DVCAM Recording)  
PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)

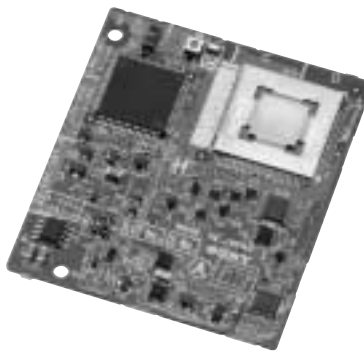


### CBK-SD01 SDI Output Board

SDI output board

#### Applicable Models

DSR-400K DVCAM Camcorder  
DSR-400L DVCAM Camcorder  
DSR-400PK DVCAM Camcorder  
DSR-400PL DVCAM Camcorder  
DSR-450WSL DVCAM Camcorder  
DSR-450WSPL DVCAM Camcorder  
DVW-970 Digital Betacam Camcorder  
DVW-970P Digital Betacam Camcorder  
MSW-970 MPEG IMX camcorder  
MSW-970P MPEG IMX camcorder PAL model  
PDW-510 XDCAM Camcorder (DVCAM Recording)  
PDW-510P XDCAM Camcorder (DVCAM Recording)  
PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)



## Camcorder Accessories/Peripherals

### HDCA-901 HD-SDI Adaptor

#### Features

- HD-SDI adaptor for HDW-F900

#### Applicable Models

HDW-F900H HDCAM Camcorder



### HKDW-702 Down Converter Board

Down converter board for HDW-750/750P/730S

#### Features

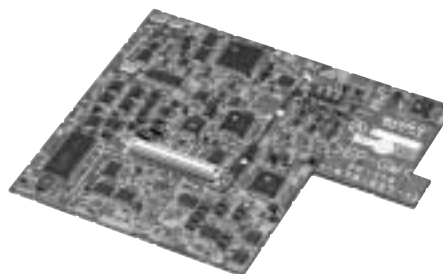
- Provides the HDW-750/750P/730S with down-converted Standard Definition output
- The output is available in SD-SDI or analog composite

#### Applicable Models

HDW-730S HDCAM Camcorder

HDW-750 HDCAM Camcorder

HDW-750P HDCAM Camcorder



### HKDW-703 Picture Cache Board

Picture cache board for HDW-750/750P/730S

#### Features

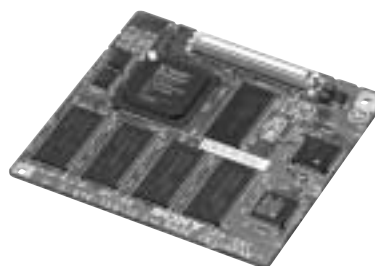
- Provides up to seven seconds of picture cache recording using solid state memory so that scenes happening prior to the press of REC start button are captured

#### Applicable Models

HDW-730S HDCAM Camcorder

HDW-750 HDCAM Camcorder

HDW-750P HDCAM Camcorder



## Camcorder Accessories/Peripherals

### HKDW-705 Slow Shutter Board

Slow shutter board for HDW-750/750P/730S

#### Features

●Allows to slow the shutter speed down to 64-frame period (1-, 2-, 3-, 4-, 5-, 6-, 7-, 8-, 16-, 32-, or 64-frame period) ●Helps to make images in extremely dark environment ●Helps to make create pictures by the intentional use of blurred images

#### Applicable Models

HDW-730S HDCAM Camcorder  
HDW-750 HDCAM Camcorder  
HDW-750P HDCAM Camcorder

### HVL-20DW2 Battery Video Light

The HVL-20DW2 is a compact and lightweight video light that can be easily attached to a camcorder.

#### Applicable Models

HVR-Z1N HDV 1080i Camcorder  
HVR-Z1P HDV 1080i Camcorder



### HVL-F10 Video Flash

Video Flash

### HVL-FH1100 Flash

The HVL-FH1100 camcorder flash docks on the camcorder's Intelligent Accessory Shoe, and the interface is designed so that when the camcorder's photo button is pressed, the light flashes in synchronization.

#### Applicable Models

DSR-PDX10 DVCAM Camcorder  
DSR-PDX10P DVCAM Camcorder

#### Supplied Accessories

Operation manual (1)  
Pouch (1)

#### Specifications

Dimensions:  
W 68 x H 110 x D 92 mm (2 3/4 x 4 3/8 x 3 5/8 inches)  
Mass:  
190 g (6.7 oz)  
Battery Power Requirements:  
AA Alkaline (4)

#### Connector:

Intelligent Accessory Shoe

## Camcorder Accessories/Peripherals

### LC-777 Carrying Case

#### Hard carrying case

\*The LC-777 is not available in some areas

#### Applicable Models

DVW-707P Digital Betacam Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-709WSP Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WSP Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 PDW-510 XDCAM Camcorder (DVCAM  
 Recording)  
 PDW-510P XDCAM Camcorder (DVCAM  
 Recording)  
 PDW-530 XDCAM Camcorder (MPEG  
 IMX/DVCAM Recording)  
 PDW-530P XDCAM Camcorder (MPEG  
 IMX/DVCAM Recording)



### LC-DN7 Carrying Case

#### Carrying case for Betacam SX camcorders

#### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-7P Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-90WSP Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DNW-9WSP Betacam SX Camcorder



### LCH-FXA Hard Carrying Case

The LCH-FXA is a hard carrying case for camcorders.

#### Applicable Models

HVR-Z1N HDV 1080i Camcorder  
 HVR-Z1P HDV 1080i Camcorder



## Camcorder Accessories/Peripherals

### LCH-TRV950 Hard Carrying Case

#### Features

●With its specially designed interior, this case can efficiently store the video camera and accessories.

#### Applicable Models

DSR-PDX10 DVCAM Camcorder  
DSR-PDX10P DVCAM Camcorder

#### Supplied Accessories

Key (2)  
Shoulder strap (1)  
Sticker (1)

#### Specifications

Dimensions:  
W 395 x H 260 x D 205 mm (15 5/8 x 10 1/4 x 8 1/8 inches)  
Mass:  
2700 g (5 lb 15 oz)

### LCH-VX2000A Hard Carrying Case

Hard Carrying Case

### LCR-FXA Rain Jacket

The LCR-FXA is a rain jacket for camcorders.

#### Applicable Models

HVR-Z1N HDV 1080i Camcorder  
HVR-Z1P HDV 1080i Camcorder



## Camcorder Accessories/Peripherals

### LCR-VX2000A Rain Jacket

Rain Jacket

### LCS-VCB Soft Carrying Case

The LCS-VCB is a soft carrying case for camcorders.

Applicable Models

HVR-Z1N HDV 1080i Camcorder  
HVR-Z1P HDV 1080i Camcorder

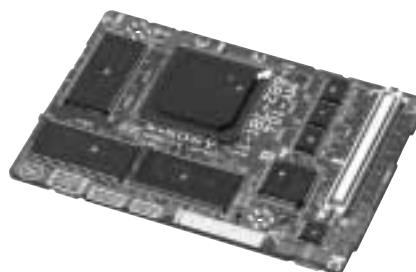


### MSDW-903 Picture Cache Board

Picture cache board for MPEG IMX camcorder

Applicable Models

MSW-970 MPEG IMX camcorder  
MSW-970P MPEG IMX camcorder PAL model



### MSDW-904 Analog Composite Input Board

Analog composite input board for MPEG IMX camcorder

Applicable Models

MSW-970 MPEG IMX camcorder  
MSW-970P MPEG IMX camcorder PAL model



## Camcorder Accessories/Peripherals

### NP-F550 InfoLITHIUM Rechargeable Battery Pack

The NP-F550 is a rechargeable battery pack, which allows a compatible device to display battery information on its LCD monitor.

#### Applicable Models

DSR-PD170 DVCAM Camcorder

DSR-PD170P DVCAM Camcorder

#### Specifications

Voltage:

7.2V

Capacity:

1500 mAh (1350 mAh)

Dimensions (W × H × D):

38.4 × 20.6 × 70.8 mm

(1 9/16 × 13/16 × 2 7/8 inches)

Mass:

Approx. 95 g (110 g)



### NP-F570 InfoLITHIUM Rechargeable Battery Pack

The NP-F570 is a rechargeable battery pack, which allows a compatible device to display battery information on its LCD monitor.

#### Applicable Models

HVR-M10N HDV 1080i VTR

HVR-M10P HDV 1080i VTR

HVR-Z1N HDV 1080i Camcorder

HVR-Z1P HDV 1080i Camcorder



### NP-F750 InfoLITHIUM Rechargeable Battery Pack

The NP-F750 is a rechargeable battery pack, which allows a compatible device to display battery information on its LCD monitor.

#### Applicable Models

DSR-PD170 DVCAM Camcorder

DSR-PD170P DVCAM Camcorder

## Camcorder Accessories/Peripherals

### NP-F770 InfoLITHIUM Rechargeable Battery Pack

The NP-F770 is a rechargeable battery pack, which allows a compatible device to display battery information on its LCD monitor.

#### Applicable Models

HVR-M10N HDV 1080i VTR  
HVR-M10P HDV 1080i VTR  
HVR-Z1N HDV 1080i Camcorder  
HVR-Z1P HDV 1080i Camcorder



### NP-F960 InfoLITHIUM Rechargeable Battery Pack

The NP-F960 is a rechargeable battery pack, which allows a compatible device to display battery information on its LCD monitor.

#### Applicable Models

DSR-PD170 DVCAM Camcorder  
DSR-PD170P DVCAM Camcorder

#### Specifications

Maximum voltage:

7.2 V DC

Capacity:

4050mAh

Dimensions:

38.4(W) × 59.7(H) × 70.8(D) mm

Mass:

Approx. 280 g



### NP-F970 InfoLITHIUM Rechargeable Battery Pack

The NP-F970 is a rechargeable battery pack, which allows a compatible device to display battery information on its LCD monitor.

#### Applicable Models

HVR-M10N HDV 1080i VTR  
HVR-M10P HDV 1080i VTR  
HVR-Z1N HDV 1080i Camcorder  
HVR-Z1P HDV 1080i Camcorder



## Camcorder Accessories/Peripherals

### 2NP-F970/B InfoLITHIUM Rechargeable (2) Battery Pack

The 2NP-F970 is a rechargeable battery pack, which includes two units of NP-F970 and allows a compatible device to display battery information on its LCD monitor.

#### Applicable Models

HVR-Z1N HDV 1080i Camcorder  
HVR-Z1P HDV 1080i Camcorder



### NP-QM91D Rechargeable Battery Pack

#### Features

- Indicate the remaining capacity of the battery via 5 types of 4 LEDs indication
- Indicate the charging via LEDs light

#### Applicable Models

DSR-PDX10 DVCAM Camcorder

#### Supplied Accessories

Operation manual (1)

#### Specifications

##### Dimensions:

W 38.2 x H 59.5 x D 55.6 mm (1 9/16 x 2 3/8 x 2 1/4 inches)

##### Mass:

225 g (7.9 oz)

##### Maximum output voltage:

DC 8.4 V

##### Capacity:

29.8 Wh (4140 mAh)

##### Operating Temperature:

0 to +40°C (+32°F to +104°F)



## Camcorder Accessories/Peripherals

# RM-B150 Remote Control Unit

### Remote control unit

#### Applicable Models

- BVP-E30 3-chip CCD Portable Color Camera
- BVP-E30P 3-chip CCD Portable Color Camera
- BVP-E30WS 3-chip CCD Portable Color Camera
- BVP-E30WSP 3-chip CCD Portable Color Camera
- DSR-450WSL DVCAM Camcorder
- DSR-450WSPL DVCAM Camcorder
- DVW-707P Digital Betacam Camcorder
- DVW-709WS Digital Betacam 16:9/4:3 Switchable Camcorder
- DVW-709WSP Digital Betacam 16:9/4:3 Switchable Camcorder
- DVW-790WS Digital Betacam 16:9/4:3 Switchable Camcorder
- DVW-790WSP Digital Betacam 16:9/4:3 Switchable Camcorder
- DVW-970 Digital Betacam Camcorder
- DVW-970P Digital Betacam Camcorder
- HDCU1000 Camera Control Unit
- HDCU1500 Camera Control Unit
- HDC-X300 HD Multi-purpose Camera
- HDC-X300K HD Multi-purpose Camera
- HDC-X310 HD Multi-purpose Camera
- HDC-X310K HD Multi-purpose Camera
- HDW-730S HDCAM Camcorder
- HDW-750 HDCAM Camcorder
- HDW-750P HDCAM Camcorder
- HDW-F900H HDCAM Camcorder
- MSW-970 MPEG IMX camcorder
- MSW-970P MPEG IMX camcorder PAL model
- PDW-510 XDCAM Camcorder (DVCAM Recording)
- PDW-510P XDCAM Camcorder (DVCAM Recording)
- PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)
- PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)
- SRPC-1 HD Video Processor
- SRW-1 HDCAM-SR Portable VTR
- WLL-RX55 Wireless Camera Receiver

#### Optional Accessories

- CCA-5 Cables 8-pin/8-pin Remote Control Cable



## Camcorder Accessories/Peripherals

# RM-B750 Remote Control Unit

### Features

- Designed to establish a highly mobile and fully controllable camera system in the field

### Applicable Models

BVP-900 3-chip CCD Studio/OB Camera System  
 BVP-950 3-chip CCD Studio/OB Camera  
 BVP-950P 3-chip CCD Studio/OB Camera  
 BVP-E30 3-chip CCD Portable Color Camera  
 BVP-E30P 3-chip CCD Portable Color Camera  
 BVP-E30WS 3-chip CCD Portable Color Camera  
 BVP-E30WSP 3-chip CCD Portable Color Camera  
 CCU-590 Portable Camera Control Unit  
 CCU-590P Portable Camera Control Unit  
 DSR-450WSL DVCAM Camcorder  
 DSR-450WSPL DVCAM Camcorder  
 DWV-707P Digital Betacam Camcorder  
 DWV-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DWV-709WSP Digital Betacam 16:9/4:3 Switchable Camcorder  
 DWV-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DWV-790WSP Digital Betacam 16:9/4:3 Switchable Camcorder  
 DWV-970 Digital Betacam Camcorder  
 DWV-970P Digital Betacam Camcorder  
 HDC-900 Multi-format HD Camera  
 HDC-910 Multi-format HD Camera  
 HDC-930 Multi-format HD Camera  
 HDC-950 Multi-format HD Camera  
 HDC-F950 Digital 4:4:4 HD Camera System  
 HDCU1000 Camera Control Unit  
 HDCU1500 Camera Control Unit  
 HDC-X300 HD Multi-purpose Camera  
 HDC-X300K HD Multi-purpose Camera  
 HDC-X310 HD Multi-purpose Camera  
 HDC-X310K HD Multi-purpose Camera  
 HDW-730S HDCAM Camcorder  
 HDW-750 HDCAM Camcorder  
 HDW-750P HDCAM Camcorder  
 HDW-F900H HDCAM Camcorder  
 MSW-970 MPEG IMX camcorder  
 MSW-970P MPEG IMX camcorder PAL model  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-510P XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 SRPC-1 HD Video Processor  
 SRW-1 HDCAM-SR Portable VTR  
 WLL-RX55 Wireless Camera Receiver

### Optional Accessories

CCA-5 Cables 8-pin/8-pin Remote Control Cable

### Specifications

#### General

Power requirements:

DC 10.5 - 30 V (max) (supplied from camera/camcorder/CCU)

Operating temperature:

+5°C to +40 °C

Dimensions:

-20°C to +55°C

Mass:

Approx. 0.7 kg (1 lb 9 oz)

#### Inputs

Control interface:

8-pin (x 1), Sony Camera Command Network Protocol

Monitor in:

BNC type (x 1) VBS (No HD signal capable)



## Camcorder Accessories/Peripherals

### VCL-716BX 1/2-inch Type Format 16x Lens

#### Specifications

##### Mass

Approx. 1.2 kg (2 lb 10 oz), including lens hood

##### Dimensions

123 x 102 x 205 mm (4 7/8 x 4 1/8 x 8 1/8 inches), including objections

##### Mount type

Sony 1/2-inch type bayonet mount

##### Focal length

7.3 to 117 mm

##### Zoom ratio

16:1

##### Zoom control

Servo/Manual switchable

##### Iris control

Servo/Manual switchable

##### Maximum relative aperture

F1.9 (7.3 to 98 mm) to F2.3 (117 mm)

##### Maximum object distance

Wide: 823 x 617 mm, Tele: 51 x 39 mm



### VCL-719BX 1/2-inch Type Format 19x Lens

#### Specifications

##### Mass:

Approx. 1.45 kg (3 lb 2 oz), including lens hood

##### Dimensions:

140 x 100 x 219 mm (5 5/8 x 4 x 8 5/8 inches), including objections

##### Mount type:

Sony 1/2-inch type bayonet mount

##### Focal length:

6.7 to 127 mm

##### Zoom ratio:

19:1

##### Zoom control:

Servo/Manual switchable

##### Iris control:

Servo/Manual switchable

##### Maximum relative aperture:

F1.4 (6.7 to 89 mm) to F2.0 (120 mm)

##### Maximum object distance:

Wide: 722 x 579 mm, Tele: 42 x 32 mm



## Camcorder Accessories/Peripherals

### VCL-HG0737X Wide Conversion Lens

#### Features

●0.7 times wide conversion lens. ●Extensive

Improvement of resolution.

#### Applicable Models

BRC-300 3-CCD Color Video Camera

DSR-PDX10 DVCAM Camcorder

DSR-PDX10P DVCAM Camcorder

#### Supplied Accessories

Carrying case (1)

Lens Caps (for the front and back of the lens)  
(2)

Operation manual (1)

#### Specifications

Dimension (Approx.) :

Diameter 67 mm (2 3/4 inches)

Length (Approx.):

47mm ( 1 7/8 inches )

Mass:

196 g ( 7 lb)

### VCL-HG0758 Wide Conversion Lens

#### Features

●0.7x

#### Applicable Models

DSR-250 DVCAM Camcorder

DSR-250P DVCAM Camcorder

### VCL-HG0872 Wide Conversion Lens

Wide conversion lens

#### Applicable Models

HVR-Z1N HDV 1080i Camcorder

HVR-Z1P HDV 1080i Camcorder



### VCL-HG1758 Tele Conversion Lens

#### Features

●1.7x

#### Applicable Models

DSR-250 DVCAM Camcorder

DSR-250P DVCAM Camcorder

DSR-PD170 DVCAM Camcorder

DSR-PD170P DVCAM Camcorder

## Camcorder Accessories/Peripherals

### VCT-1170RM Video Tripod with Remote Control

Video Tripod with Remote Control

Applicable Models

DSR-PD170 DVCAM Camcorder

DSR-PD170P DVCAM Camcorder

### VCT-FXA Shoulder Brace

The VCT-FXA is a shoulder brace that allows a camcorder to comfortably sit on the shoulder of the operator.

Applicable Models

HVR-Z1N HDV 1080i Camcorder

HVR-Z1P HDV 1080i Camcorder



### VF-72CPK PL Filter Kit

PL filter kit

Applicable Models

HVR-Z1N HDV 1080i Camcorder

HVR-Z1P HDV 1080i Camcorder



### VF-R37K ND Filter Kit

Features

●Suppress halation caused by the overexposure that occurs in fair weather, at the seaside, on snow scape or other such locations with this ND filter. ●Includes a MC Protector to prevent camera lens damage and a case.

Applicable Models

DSR-PDX10 DVCAM Camcorder

DSR-PDX10P DVCAM Camcorder

Supplied Accessories

MC Protector (1)

ND Filter (1)

Case (1)

Specifications

**MC Protector**

Dimension (Approx.):

Diameter 41 mm (1 5/8 inches)

Length (Approx.):

7 mm ( 9/32 inches )

Mass:

9 g (0.3 oz)

**ND Filter**

Dimension (Approx.):

Diameter 41mm (1 5/8inches)

Length (Approx.):

7 mm ( 9/32 inches )

Mass:

10 g (0.4 oz)

Camcorder Accessories/Peripherals

VF-58PK Filter Kit

PL Filter and Multi-coat Filter

Applicable Models

- DSR-250 DVCAM Camcorder
- DSR-PD170 DVCAM Camcorder
- DSR-PD170P DVCAM Camcorder

Camcorder Accessories/Peripherals



Camcorder Accessories/Peripherals

HDCAM-SR VTRs

SRW-5000..... 280  
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SRW-1..... 284  
SRPC-1..... 286

## HDCAM-SR VTRs

### SRW-5000 HDCAM-SR VTR

The SRW-5000 is a high-end HD digital videocassette recorder that employs the HDCAM-SR format. Applications range from HDTV to digital cinematography. Key features include high-quality 1080i, 1080PsF, or 720PsF recording and playback, a wide array of internal format conversions, including 4:4:4 to 4:2:2, legacy playback of HDCAM and Digital BETACAM tape formats.

#### Features

- High picture quality using the HDCAM-SR format ●1080 HDCAM-SR recording and playback at multiple frame rates: 23.98PsF, 24PsF, 25PsF, 29.97PsF, 50i, 59.94i
- 720P HDCAM-SR recording and playback ●Switchable 4:4:4(\*1)/4:2:2 recording ●High-quality MPEG-4 Studio Profile compression ●High-quality audio recording: 12-channels, 24-bit audio at 48kHz in the HDCAM-SR format ●Internal format conversion including up- and down-conversion, 4:4:4 to 4:2:2 conversion (\*2)
- Playback of HDCAM and Digital Betacam format tapes(\*3) ●Long recording time on a single cassette of up to 155 minutes at 1080/24PsF ●User-friendly controls ●Frame-accurate insert/assemble editing ●High-speed color picture search ●Dynamic Tracking playback ●Digital-Jog Sound ●Dynamic Motion Control (DMC) playback ●Pre-read editing ●Confidence playback ●Selectable picture modes including squeeze, letter box, and edge crop ●Audio-output channel routing; can route audio to any HD-SDI or SDI output ●Dual-sync operation ●Off-speed playback capability ●Built-in Tele-File read/write capability ●Metadata Handling ●Newly designed DT-Head ●New HDCAM-SR tape formula for high reliability and durability ●Easy maintenance

(\*1) Requires the optional HKSR-5003 RGB Processor Board (\*2) Requires the optional Format Converter Board (\*3) To playback Digital Betacam tapes, the optional HKSR-5002 Digital Betacam Processor Board is required.

#### Supplied Accessories

Operation manual (1)

Installation manual (1)

#### Optional Accessories

HKSR-5001 Format Converter Board

HKSR-5002 Digital BETACAM Processor Board

HKSR-5003 RGB Processor Boards

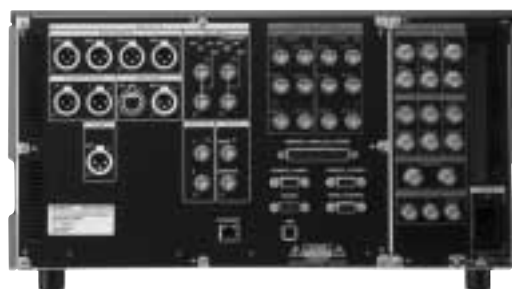
RMM-110 Rack Mount Kit

BCT-HD12CL tapes Head Cleaning

Videocassette Tapes for HDCAM VTRs

BCT-SR tapes BCT-SR Series HDCAM SR Tapes

HKDV-900 HD Digital Video Controller



# HDCAM-SR VTRs

## Specifications

### General

Power requirements  
100 to 240 V AC ( $\pm 10\%$ , 50/60 Hz)  
Power consumption  
230 W (without options)/320 W (with all option boards installed)  
Operating temperature  
 $+5^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$  ( $+41^{\circ}\text{F}$  to  $+104^{\circ}\text{F}$ )  
Storage temperature  
 $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $+140^{\circ}\text{F}$ )  
Operating humidity  
25% to 80% (relative humidity)  
Mass (approx.)  
30 kg (66 lb 2 oz)  
Dimensions (W x H x D excluding protrusions)  
427 x 218 x 544 mm (16 3/4 x 8 5/8 x 21 1/2 inches)  
Tape speed  
HDCAM-SR: 94.2 mm/s (24 Hz)  
HDCAM: 77.4 mm/s (24 Hz)  
Digital Betacam: 96.7 mm/s  
HDCAM-SR recording/playback time  
155 min with BCT-124SRL cassette (24 Hz)  
HDCAM playback time  
155 min with BCT-124HDL cassette (24 Hz)  
Digital Betacam playback time  
124 minutes with BCT-D124L tape  
Fast-forward/rewind time  
Approx. 4 min with BCT-124SRL cassette  
Search speed range  
Shuttle mode  
HDCAM-SR: Still to  $\pm 50$  times normal playback speed (24 Hz)HDCAM: Still to  $\pm 58$  times normal playback speed (25 Hz)Digital Betacam: Still to  $\pm 50$  times normal playback speed  
Variable mode  
HDCAM-SR: -1 to 2 times normal playback speedHDCAM: -1 to 2 times normal playback speedDigital Betacam: -1 to 3 times normal playback speed  
Jog Mode  
HDCAM-SR: Still to  $\pm 2$  times normal playback speedHDCAM: Still to  $\pm 3$  times normal playback speedDigital Betacam: Still to  $\pm 3$  times normal playback speed  
Dynamic Tracking Range  
-1 to +2 times normal playback speed  
Servo-lock time  
1.0 sec or less (from standby on)  
Load/unload time  
7.0 sec or less  
**Input/Output**  
HD-SDI input A  
BNC (1+ 1 for monitoring loop-through), Serial digital (1.485 Gb/s), SMPTE 292M/BTA S-004/ITU-R.BT 709  
HD-SDI input B  
(optional HKSR-5003 required)  
BNC (1+ 1 for monitoring loop-through), Serial digital (1.485 Gb/s), SMPTE 292M/BTA S-004/ITU-R.BT 709  
HD/SD reference video input 1  
BNC (1 + 1 for loop-through), Tri Level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or Black Burst, 0.286 Vp-p, 75  $\Omega$ , sync negative

HD/SD reference video input 2 -(optional HKSR-5001 required)  
BNC (1 + 1 for loop-through), Tri Level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or Black Burst, 0.286 Vp-p, 75  $\Omega$ , sync negative  
Digital-audio input (CH1/2, CH3/4, CH5/6, CH7/8, CH9/10, CH11/12)  
BNC (x6, AES/EBU), unbalanced  
Time-code input  
XLR-3-pin type, (female x1), 0.5 to 18 Vp-p, 10 k $\Omega$ , balanced  
HD-SDI output  
BNC (x3, with character out), Serial digital (1.485 Gb/s), SMPTE 292M/BTA S004/ITU-R.BT 709  
Format-converter output  
(optional HKSR-5001 required)  
BNC (x2), with character out  
SD-SDI output  
BNC (2 + 1 with character out), D1 serial digital (270 Mb/s), SMPTE 259M  
Analog down-converted output  
Composite: BNC (x1 with character out) 1.0 Vp-p, 75  $\Omega$ , sync negative)SD sync: BNC (x1, Black Burst, 0.286 Vp-p, 75  $\Omega$ , sync negative)  
Analog reference output  
1125 Sync: BNC (x2), Tri Level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative  
Digital-audio output (CH1/2 CH3/4 CH5/6 CH7/8 CH9/10 CH11/12)  
BNC (x6), AES/EBU, unbalanced  
Analog-audio output  
(CH1/2/3/4/Cue\*)  
XLR-3-pin type, (male x5), +4 dBm, (with a 600  $\Omega$  load), low impedance, balanced  
Monitor output (L/R)  
XLR-3-pin type, (male x2), +4 dBm, (with a 600  $\Omega$  load), low impedance, balanced  
Time-code output  
XLR-3-pin type, (male x1), 2.2 Vp-p low impedance, balanced  
Phones  
JM-60 stereo phone jack,  $-\infty$  to 12 dBu (with an 8  $\Omega$  load), unbalanced  
Remote 1 input  
D-sub 9-pin, (female), Sony 9-pin remote interface  
Remote 1 input/output  
D-sub 9-pin, (female), Sony 9-pin remote interface  
Video control  
D-sub 9-pin, (female), (for optional HKDV-900)  
Parallel remote  
D-sub 50-pin, (female)  
Ethernet  
10Base-T modular jack  
**Digital-Video Performance**  
Sampling frequency  
Y: 74.25 MHz, Pb/Pr: 37.125 MHz, G/B/R: 74.25 MHz  
Quantization  
10 bits/sample  
Compression  
MPEG-4 Studio Profile  
Channel coding  
S-NRZ  
Error correction  
Reed-Solomon code  
Error concealment  
Adaptive three-dimensional

## Analog Composite-Output Performance

Bandwidth  
Y: 0 to 5.75 MHz +5.0 dB/-3.0 dB  
S/N ratio  
56 dB or more  
Y/C delay  
15 ns or less  
K Factor (2T Pulse)  
1% or less  
Output SCH phase  
Based upon RS-170A/CCIR R.624-3  
**Digital-Audio Performance**  
Sampling frequency  
48 kHz (synchronized with video)  
Quantization  
HDCAM-SR: 24 bits/sample  
Wow & flutter  
Below measurable level  
Headroom  
20/18/16/12 dB selectable  
**Analog Audio-Output Performance**  
D/A quantization  
24 bits/sample  
Frequency response  
20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)  
Dynamic range  
More than 100 dB (At 1dB at 1 kHz)  
Distortion  
Less than 0.05% (At 1 kHz, reference level)  
Crosstalk  
Less than -80 dB (At 1 kHz, between any two channels)  
De-emphasis  
T1 = 50  $\mu\text{s}$ , T2 = 15  $\mu\text{s}$  (auto on/off)

\*HDCAM and Digital Betacam playback only

## HDCAM-SR VTRs

### SRW-5500 HDCAM-SR VTR

The SRW-5500 is a high-end HD digital videocassette recorder that employs the HDCAM-SR formats. This VTR also allows recording and playback of the well-proven HDCAM format. Applications range from HDTV to digital cinematography. Key features include high-quality 1080i, 1080PsF, or 720P recording and playback, a wide array of internal format conversions, including 4:4:4 to 4:2:2, legacy playback of Digital Betacam tape formats.

#### Features

- High picture quality using the HDCAM-SR and HDCAM formats
- 1080 recording and playback in HDCAM-SR and HDCAM formats at multiple frame rates: 23.98PsF, 24PsF, 25PsF, 29.97PsF, 50i, 59.94i
- 720P recording and playback (HDCAM-SR only)
- Switchable 4:4:4(\*1)/4:2:2 recording
- High-quality MPEG-4 Studio Profile compression (HDCAM-SR)
- High-quality audio recording: 12-channels, 24-bit audio at 48kHz in the HDCAM-SR format(\*2)
- Internal format conversion including up- and down-conversion, 4:4:4 to 4:2:2 conversion(\*3)
- Playback of Digital Betacam format tapes(\*4)
- Long recording time on a single cassette of up to 155 minutes at 1080/24PsF
- User-friendly controls
- Frame-accurate insert/assemble editing
- High-speed color picture search
- Dynamic Tracking playback
- Digital-Jog Sound
- Dynamic Motion Control (DMC) playback
- Pre-read editing
- Confidence playback
- Selectable picture modes including squeeze, letter box, and edge crop
- Audio-output channel routing; can route audio to any HD-SDI or SDI output
- Dual-sync operation
- Off-speed playback capability
- Built-in Tele-File read/write capability
- Metadata Handling
- Newly designed DT-Head
- New HDCAM-SR tape formula for high reliability and durability
- Easy maintenance

(\*1) Requires the optional HKSR-5003 RGB Processor Board

(\*2) The HDCAM format offers four-channel audio recording. (\*3) Requires the optional Format Converter Board (\*4) To playback Digital Betacam tapes, the optional HKSR-5002 Digital Betacam Processor Board is required.

#### Supplied Accessories

Operation manual (1)

Installation manual (1)

#### Optional Accessories

HKSR-5001 Format Converter Board

HKSR-5002 Digital BETACAM Processor Board

HKSR-5003 RGB Processor Boards

RMM-110 Rack Mount Kit

BCT-SR tapes BCT-SR Series HDCAM SR

Tapes

BCT-HD tapes BCT-HD series HDCAM tapes

BCT-HD12CL tapes Head Cleaning

Videocassette Tapes for HDCAM VTRs

HKDV-900 HD Digital Video Controller



## HDCAM-SR VTRs

### Specifications

#### General

##### Power requirements

100 to 240 V AC ( $\pm 10\%$ , 50/60 Hz)

##### Power consumption

230 W (without options)/320 W (with all option boards installed)

##### Operating temperature

+5°C to +40°C (+41°F to +104°F)

##### Storage temperature

-20°C to +60°C (-4°F to +140°F)

##### Operating humidity

25% to 80% (relative humidity)

##### Mass (approx.)

30 kg (66 lb 2 oz)

##### Dimensions (W x H x D excluding protrusions)

427 x 218 x 544 mm (16 3/4 x 8 5/8 x 21 1/2 inches)

##### Tape speed

HDCAM-SR: 94.2 mm/s (24 Hz)

HDCAM: 77.4 mm/s (24 Hz)

Digital Betacam: 96.7 mm/s

##### HDCAM-SR/HDCAM recording/Playback time

155 min with BCT-124SR cassette (24 Hz) with BCT-124SRL

##### Digital Betacam playback time

124 minutes with BCT-D124L tape

##### Fast-forward/rewind time

Approx. 4 min with BCT-124SR cassette

##### Search speed range

##### Shuttle mode

HDCAM-SR: Still to  $\pm 50$  times normal playback speed (24 Hz)HDCAM: Still to  $\pm 58$  times normal playback speed (25 Hz)Digital Betacam: Still to  $\pm 50$  times normal playback speed

##### Variable mode

HDCAM-SR: -1 to 2 times normal playback speedHDCAM: -1 to 2 times normal playback speedDigital Betacam: -1 to 3 times normal playback speed

##### Jog Mode

HDCAM-SR: Still to  $\pm 2$  times normal playback speedHDCAM: Still to  $\pm 3$  times normal playback speedDigital Betacam: Still to  $\pm 3$  times normal playback speed

##### Dynamic Tracking Range

-1 to +2 times normal playback speed

##### Servo-lock time

1.0 sec or less (from standby on)

##### Load/unload time

7.0 sec or less

#### Input/Output

##### HD-SDI input A

BNC (1+ 1 for monitoring loop-through), Serial digital (1.485 Gb/s), SMPTE 292M/BTA S-004/ITU-R.BT 709

##### HD-SDI input B

(optional HKSR-5003 required)

BNC (1+ 1 for monitoring loop-through), Serial digital (1.485 Gb/s), SMPTE 292M/BTA S-004/ITU-R.BT 709

##### HD/SD reference video input 1

BNC (1+ 1 for loop-through), Tri Level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or Black Burst, 0.286 Vp-p, 75  $\Omega$ , sync negative

##### HD/SD reference video input 2 -(optional HKSR-5001 required)

BNC (1+ 1 for loop-through), Tri Level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or Black Burst, 0.286 Vp-p, 75  $\Omega$ , sync negative

Digital-audio input (CH1/2, CH3/4, CH5/6, CH7/8, CH9/10, CH11/12)

BNC (x6, AES/EBU), unbalanced

##### Analog audio input (Cue)

XLR-3-pin, female x1

##### Time-code input

XLR-3-pin type, (female x1), 0.5 to 18

Vp-p, 10 k $\Omega$ , balanced

##### HD-SDI output

BNC (x3, with character out), Serial digital

(1.485 Gb/s), SMPTE 292M/BTA

S004/ITU-R.BT 709

##### Format-converter output

(optional HKSR-5001 required)

BNC (x2), with character out

##### SD-SDI output

BNC (2+ 1 with character out), D1 serial

digital (270 Mb/s), SMPTE 259M

##### Analog down-converted output

Composite: BNC (x1 with character out)

1.0 Vp-p, 75  $\Omega$ , sync negative)SD sync:

BNC (x1, Black Burst, 0.286 Vp-p, 75  $\Omega$ , sync negative)

##### Analog reference output

1125 Sync: BNC (x2), Tri Level sync, 0.6

Vp-p, 75  $\Omega$ , sync negative

##### Digital-audio output (CH1/2 CH3/4

CH5/6 CH7/8 CH9/10 CH11/12)

BNC (x6), AES/EBU, unbalanced

##### Analog-audio output

(CH1/2/3/4/Cue\*)

XLR-3-pin type, (male x5), +4 dBm, (with a 600  $\Omega$  load), low impedance, balanced

##### Monitor output (L/R)

XLR-3-pin type, (male x2), +4 dBm, (with a 600  $\Omega$  load), low impedance, balanced

##### Time-code output

XLR-3-pin type, (male x1), 2.2 Vp-p low

impedance, balanced

##### Phones

JM-60 stereo phone jack,  $-\infty$  to 12 dBu (with an 8  $\Omega$  load), unbalanced

##### Remote 1 input

D-sub 9-pin, (female), Sony 9-pin remote interface

##### Remote 1 input/output

D-sub 9-pin, (female), Sony 9-pin remote interface

##### Video control

D-sub 9-pin, (female), (for optional

HKDV-900)

##### Parallel remote

D-sub 50-pin, (female)

##### Ethernet

10Base-T modular jack

#### Digital-Video Performance

##### Sampling frequency

HDCAM-SR: Y: 74.25 MHz, Pb/Pr: 37.125

MHz, G/B/R: 74.25 MHzHDCAM: Y: 74.25

MHz, Pb/Pr: 37.125 MHz

##### Quantization

10 bits/sample

##### Compression

HDCAM-SR: MPEG-4 Studio

ProfileHDCAM: Coefficient Recording

System

##### Channel coding

S-NRZ

##### Error correction

Reed-Solomon code

##### Error concealment

Adaptive three-dimensional

#### Analog Composite-Output Performance

##### Bandwidth

Y: 0 to 5.75 MHz +5.0 dB/-3.0 dB

##### S/N ratio

56 dB or more

##### Y/C delay

15 ns or less

##### K Factor (2T Pulse)

1% or less

##### Output SCH phase

Based upon RS-170A/CCIR R.624-3

#### Digital-Audio Performance

##### Sampling frequency

48 kHz (synchronized with video)

##### Quantization

HDCAM-SR: 24 bits/sampleHDCAM: 20 bits/sample

##### Wow & flutter

Below measurable level

##### Headroom

20/18/16/12 dB selectable

#### Analog Audio-Output Performance

##### D/A quantization

24 bits/sample

##### Frequency response

20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)

##### Dynamic range

More than 100 dB (At 1 dB at 1 kHz)

##### Distortion

Less than 0.05% (At 1 kHz, reference level)

##### Crosstalk

Less than -80 dB (At 1 kHz, between any two channels)

##### De-emphasis

T1 = 50  $\mu$ s, T2 = 15  $\mu$ s (auto on/off)

\*HDCAM and Digital Betacam playback only

## HDCAM-SR VTRs

### SRW-1 HDCAM-SR Portable VTR

Used with the SRPC-1 HD Video Processor, the SRW-1 HD Digital Video Cassette Recorder forms the first Sony full-bandwidth HD 4:4:4 (RGB) portable VTR system. Adopting the HDCAM-SR format, the SRW-1/SRPC-1 offers virtually lossless 1080-line high-definition recordings at multiple frame rates on the very latest HDCAM-SR tape media. Offering unprecedented HD image quality, excellent operability, and powerful interfacing capabilities, the SRW-1 and SRPC-1 offer the ideal HD portable VTR system, especially for movie-making, commercial production, and high-end television production applications.

#### Features

- High-quality HD field recording ●Double speed recording
- Multi-frame-rate 1080 HD Recording and Playback
- 720P Recording and Playback ●12 channels of 24 bit audio ●Single Fiber Connection

#### Supplied Accessories

Operational Manual (1)

#### Optional Accessories

BCT-HD12CL tapes Head Cleaning  
 Videocassette Tapes for HDCAM VTRs  
 BCT-SR tapes BCT-SR Series HDCAM SR Tapes  
 RM-B750 Remote Control Unit  
 BC-L70 Li-ion Battery Charger  
 BC-M150 Ni-MH & Li-ion Battery Charger  
 HKSR-101 Optical Interface Board  
 AC-550 AC Adaptor  
 AC-550CE AC Adaptor  
 AC-DN10 AC Adaptor/Charger  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 RM-B150 Remote Control Unit



Upper unit: SRW-1, Lower unit: SRPC-1

# HDCAM-SR VTRs

## Specifications

### General

Power requirement:

DC +12 V (DC +11 to +17 V)

Operating temperature:

0 to +40 °C

Storage temperature:

-20 to +60 °C

Humidity:

25 to 80% (relative humidity)

Mass:

8.5 kg (18 lb. 12 oz)

Dimensions (W x H x D):

279 x 399 x 139 mm (11 x 15 3/4 x 5 5/8 inches)

Recording format:

HDCAM-SR

Recording/Playback time:

Normal speed recording: 50 min. with BCT-40SR cassette (24P mode)

Double speed recording: 25 min. with BCT-40SR cassette (24P mode)

Fast forward/rewind time:

5 min.

Fast forward/rewind speed:

±11 times

Search speed (Shuttle mode):

±11 times

### Input/Output signals

HD serial V/A input:

BNC x 2, Serial Digital (1.485 Gb/s), SMPTE-292M/SMPTE-372M/BTA-S004/ITU-R.BT709

HD reference video input:

BNC x 1, Tri Level Sync, 0.6 Vp-p, 75 Ω, sync negative

SD reference video input:

BNC x 1, Black Burst, 0.286 Vp-p, 75 Ω, sync negative

Digital audio input:

BNC x 2 (AES/EBU)

Analog audio input:

XLR-3-pin x 4 (female)

Time code input:

BNC (x 1), 0.5 to 18 Vp-p, 10 kΩ

HD serial V/A output:

BNC x 2, serial digital (1.485 Gb/s), SMPTE-292M/SMPTE-372M/BTA-S004/ITU-R.BT709

HD serial V/A monitor output:

BNC x 1 (with character out), serial digital (1.485 Gb/s), SMPTE-292M/BTA-S004/ITU-R.BT709

SD serial V/A monitor output:

BNC x 1 (with character out), D1 serial digital (270 Mb/s), SMPTE-259M

Digital audio output (ch1 to ch12):

D-Sub multi connector

Analog audio monitor output:

XLR-3pin x 2 (male)

Time code output:

BNC x 1, 1.0 Vp-p (75 Ω), 2.2 Vp-p (10 kΩ)

Phones:

Stereo mini jack x 2 -17 dBu

Remote input:

D-sub 9-pin, (female), Sony 9pin remote interface

### Digital video performance

Sampling frequency:

Y: 74.25 MHz, Pb/Pr: 37.125 MHz

G: 74.25 MHz, B: 74.25 MHz, R: 74.25 MHz

Quantization:

10 bits/sample

Compression:

MPEG-4 Studio Profile

Channel coding:

S-NRZ

Error correction:

Reed-Solomon code

### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

24 bits/sample

Wow and flutter:

Below measurable level

### Analog audio performance (Playback with the SRW-5000 VTR)

Sampling frequency:

24 bits/sample

Frequency response:

20 Hz to 20 kHz, +0.5 dB/-1.0 dB (reference level)

Dynamic range:

More than 100 dB (1 kHz)

Distortion:

Less than 0.05% (at 1 kHz, reference level)

Crosstalk:

Less than -80 dB (at 1kHz, between any two channels)



## HDCAM-SR VTRs

### SRPC-1 HD Video Processor

Used with the SRW-1 HD Digital Video Cassette Recorder, the SRPC-1 HD Video Processor forms the first Sony full-bandwidth HD 4:4:4 (RGB) portable VTR system. Adopting the HDCAM-SR format, the SRW-1/SRPC-1 offers virtually lossless 1080-line high-definition recordings at multiple frame rates on the very latest HDCAM-SR tape media. Offering unprecedented HD image quality, excellent operability, and powerful interfacing capabilities, the SRW-1 and SRPC-1 offer the ideal HD portable VTR system, especially for movie-making, commercial production, and high-end television production applications.

#### Features

- High-quality HD field recording ●Double speed recording
- Multi-frame-rate 1080 HD Recording and Playback
- 720P Recording and Playback ●12 channels of 24 bit audio ●Single Fiber Connection

#### Supplied Accessories

Operational Manual (1)

#### Optional Accessories

BCT-HD12CL tapes Head Cleaning  
 Videocassette Tapes for HDCAM VTRs  
 RM-B750 Remote Control Unit  
 BC-M150 Ni-MH & Li-ion Battery Charger  
 HKSR-101 Optical Interface Board  
 AC-550 AC Adaptor  
 BC-L70 Li-ion Battery Charger  
 AC-550CE AC Adaptor  
 AC-DN10 AC Adaptor/Charger  
 BP-GL95 Rechargeable Lithium-ion Battery Pack  
 BP-GL65 Rechargeable Lithium-ion Battery Pack  
 BP-L60S Rechargeable Lithium-ion Battery Pack  
 BP-IL75 Rechargeable Lithium-ion Battery Pack  
 BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
 BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
 RM-B150 Remote Control Unit



Upper unit: SRW-1, Lower unit: SRPC-1

# HDCAM-SR VTRs

## Specifications

### General

Power requirement:  
DC +12 V (DC +11 to +17 V)  
Operating temperature:  
0 to +40 °C  
Storage temperature  
-20 to +60 °C  
Humidity:  
25 to 80% (relative humidity)  
Mass:  
8.5 kg (18 lb. 12 oz)  
Dimensions (W x H x D):  
279 x 399 x 139 mm (11 x 15 3/4 x 5 5/8 inches)  
Recording format:  
HDCAM-SR  
Recording/Playback time:  
Normal speed recording: 50 min. with BCT-40SR cassette (24P mode)  
Double speed recording: 25 min. with BCT-40SR cassette (24P mode)  
Fast forward/rewind time:  
5 min.  
Fast forward/rewind speed:  
±11 times  
Search speed (Shuttle mode):  
±11 times

### Input/Output signals

HD serial V/A input:  
BNC x 2, Serial Digital (1.485 Gb/s), SMPTE-292M/SMPTE-372M/BTA-S004/ITU-R.BT709  
HD reference video input:  
BNC x 1, Tri Level Sync, 0.6 Vp-p, 75 Ω, sync negative  
SD reference video input:  
BNC x 1, Black Burst, 0.286 Vp-p, 75 Ω, sync negative  
Digital audio input:  
BNC x 2 (AES/EBU)  
Analog audio input:  
XLR-3pin x 4 (female)  
Time code input:  
BNC (x 1), 0.5 to 18 Vp-p, 10 kΩ  
HD serial V/A output:  
BNC x 2, serial digital (1.485 Gb/s), SMPTE-292M/SMPTE-372M/BTA-S004/ITU-R.BT709  
HD serial V/A monitor output:  
BNC x 1 (with character out), serial digital (1.485 Gb/s), SMPTE-292M/BTA-S004/ITU-R.BT709  
SD serial V/A monitor output:  
BNC x 1 (with character out), D1 serial digital (270 Mb/s), SMPTE-259M  
Digital audio output (ch1 to ch12):  
D-Sub multi connector  
Analog audio monitor output  
XLR-3-pin x 2 (male)  
Time code output:  
BNC x 1, 1.0 Vp-p (75 Ω), 2.2 Vp-p (10 kΩ)  
Phones:  
Stereo mini jack x 2 -17 dBu  
Remote input:  
D-sub 9-pin, (female), Sony 9pin remote interface

### Digital video performance

Sampling frequency:  
Y: 74.25 MHz, Pb/Pr: 37.125 MHz  
G: 74.25 MHz, B: 74.25 MHz, R: 74.25 MHz

Quantization:  
10 bits/sample  
Compression:  
MPEG-4 Studio Profile  
Channel coding:  
S-NRZ  
Error correction:  
Reed-Solomon code  
**Digital audio performance**  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
24 bits/sample  
Wow and flutter:  
Below measurable level  
**Analog audio performance (Playback with the SRW-5000 VTR)**  
Sampling frequency:  
24 bits/sample  
Frequency response:  
20 Hz to 20 kHz, +0.5 dB/-1.0 dB (reference level)  
Dynamic range:  
More than 100 dB (1 kHz)  
Distortion:  
Less than 0.05% (at 1 kHz, reference level)  
Crosstalk:  
Less than -80 dB (at 1kHz, between any two channels)



HDCAM-SR VTRs

HDCAM-SR VTRs



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HDW-2000..... 302

HDW-M2100 ..... 304

HDW-M2100P ..... 306

HDW-S280 ..... 308

## HDCAM VTRs

# HDW-F500 HDCAM Digital Videocassette Recorder

### Features

- Superb picture quality of HDCAM format
- Multi-format recording and playback capability of 23.976/24/25/29.97/30 progressive and 50/59.94/60 interlace signals
- Supports 1080/24PsF format which is defined as ITU-R.BT709-3 HDTV Standards for Production and International Program Exchange
- Powerful error correction
- Long recording time of max.155 minutes (24P mode)
- High-performance, high-accuracy heads and drum with dynamic tracking technique
- Various output interfaces including D1 SDI (525/625) or D2 SDI (525 only) and analog composite outputs (Optional HKDV-501A required)
- 480 output via dual-link SDI and analog composite (NTSC/PAL)
- Easy-to-maintain plug-in boards such as down converter and pull-down engine
- Various remote interfaces including RS-422A, RS-232C and Parallel 50-pin interfaces (Optional BKDW-509 required)
- Digital signal processing takes 4:2:2 digital component signal
- AES/EBU digital audio and analog audio input/output
- Internal time code generator and reader
- Computer servo system
- Self-diagnostic system
- Compact, lightweight, low power consumption and 19-inch rack mountable



### Supplied Accessories

Operation Manual (1)  
Installation Manual (1)

### Optional Accessories

HKDV-501A HD-SD Down Converter Board  
HKDV-502 HD Line Converter Board  
HKDV-506A SDTI Board  
RMM-110 Rack Mount Kit  
BCT-HD12CL tapes Head Cleaning  
Videocassette Tapes for HDCAM VTRs  
BCT-HD tapes BCT-HD series HDCAM tapes

# HDCAM VTRs

## Specifications

### General

Power requirements:  
AC 100 to 240 V (+/-10 %, 50/60 Hz)  
Power consumption:  
230 W  
Operating temperature:  
+5 °C to +40 °C (+41 °F to +104 °F)  
Storage temperature:  
-20 °C to +60 °C (-4 °F to + 140 °F)  
Operating humidity:  
25% to 80% (relative humidity)  
Mass (Approx.):  
35 kg (77 lb. 2 oz)  
Dimensions (W x H x D):  
427 x 237 x 520 mm (16 3/4 x 9 3/8 x 20 1/2 inches)  
Tape Speed:  
77.4 mm/s (24P mode)  
Digital recording/playback time:  
Max. 155 min with BCT-124HDL cassette (24P mode)  
Fast forward/rewind time:  
Approx. 3 min with BCT-124HDL cassette  
Search speed range:  
+/- 60 times normal playback speed (24P mode)  
Servo lock time:  
1.0 s or less (form standby on)  
Load/unload time:  
6 s or less  
**Input/output**  
HD Serial V/A input:  
BNC (x 1, with an input monitor), Serial digital (1.485Gbps), SMPTE 292M/BTA S-004/ITU-R.BT.709  
HD Reference video input:  
BNC (x 1 with a loop-through), Tri level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative  
SD Reference video input:  
BNC (x 1 with a loop-through), Black Burst, 0.286 Vp-p, 75  $\Omega$ , sync negative  
Digital audio input (CH1/2 3/4):  
BNC (x 2 with 2 loop-through), AES/EBU  
Analog audio input (CH1/2/3/4/Cue):  
XLR 5-pin type (male),  
Low Off: -60 dBu, high impedance, balanced  
High off: +4 dBu, high impedance, balanced  
High On: +4 dBm, 600  $\Omega$  termination, balanced  
Time code input:  
XLR 3-pin type (male, x 1), 0.5 to 18 Vp-p, 10 k $\Omega$ , balanced  
Dubbing input (option required):  
BNC (x 1), Serial digital  
HD Serial V/A output:  
BNC (x 4, with a character out), Serial digital (1.485 Gbps), SMPTE 292M/BTA S-004/ITU-R.BT.709  
Pull-down out (option required):  
BNC x 2 (with character)  
D1 serial V/A output (option required):  
BNC (x 3, with a character out), D1 serial digital (270 Mbps) SMPTE 259M  
Analog I/O down converted output (option required):  
Composite: BNC (x 1 with a character out), 1.0 Vp-p 75  $\Omega$ , sync negative SD Sync:  
BNC (x 1 Black burst, 0.286 Vp-p, 75  $\Omega$ , sync negative

Analog I/O Reference output:  
1125 Sync: BNC (x 2) Tri level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative  
Digital audio output (CH1/2 3/4):  
BNC (x 2), AES/EBU, unbalanced  
Analog audio input (CH1/2/3/4/Cue):  
XLR 3-pin type (female x 5), +4 dBm, (with a 600  $\Omega$  load) low impedance, balanced  
Monitor output (L/R):  
XLR 3-pin type (female x 2), +4 dBm, (with a 600  $\Omega$  load) low impedance, balanced  
Time code output:  
XLR 3-pin type, (female x 1), 2.2 Vp-p, low impedance balanced,  
Phones:  
JM-60 stereo phone jack, - $\infty$  to -12 dBu (with an 8  $\Omega$  load), unbalanced  
Dubbing output (option required):  
BNC (x 1), Serial digital  
Remote 1 input:  
D-sub 9-pin, female, Sony 9-pin remote interface  
Remote 1 output:  
D-sub 9-pin, female, Sony 9-pin remote interface  
RS-232C:  
D-sub 25-pin, female  
Video Control:  
D-sub 9-pin, female (for optional HKDV-503)  
Parallel remote:  
D-sub 50-pin, female (optional BKDW-509 required)  
Panel remote:  
D-sub 15-pin, female  
**Digital video performance**  
Sampling frequency:  
Y: 74.25 MHz, PB/PR: 37.125 MHz  
Quantization:  
10 bits/sample (Compression 8 bits/sample)  
Compression:  
Coefficient recording system  
Channel coding:  
S-NRZI PR-IV  
Error correction:  
Reed-Solomon code  
Error concealment:  
Adaptive three dimensional  
**Analog composite output performance (with optional HKDV-501A)**  
Bandwidth:  
Y: 0 to 5.75 MHz +0.5 dB/-3.0 dB  
S/N ratio:  
56 dB or more  
Y/C delay:  
15 ns or less  
K Factor (2T Pulse):  
1 % or less  
Output SCH phase:  
Based upon RS-170A/CCIR R.624-3  
**Digital audio performance**  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
20 bits/sample  
Wow & flutter:  
Below measurable level  
Headroom:  
20 dB (or 18 dB selectable)  
Emphasis:  
T1 = 50  $\mu$ s, T2 = 15  $\mu$ s (on/off selectable in recording mode)

## Analog audio output performance

A/D quantization:  
20 bits/sample  
D/A quantization:  
20 bits/sample  
Frequency response:  
20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)  
Dynamic range:  
More than 95 dB (at 1 kHz emphasis on)  
Distortion:  
Less than 0.05% (at 1 kHz, emphasis on, reference level)  
Cross talk:  
Less than -90 dB (at 1 kHz, between any two channels)  
**Cue track**  
Frequency response:  
90 Hz to 12 kHz +/-3dB  
S/N ratio:  
More than 45 dB (at 3% distortion level)  
Distortion:  
Less than 2% (T.H.D at 1 kHz reference level)  
Wow & flutter:  
Less than 0.2% rms

## HDCAM VTRs

# HDW-M2000 HDCAM VTR

### Features

•Compact and affordable high-definition VTR •High picture quality using HDCAM format •Legacy playback includes Digital Betacam, MPEG IMX, Betacam SX, Betacam SP and Betacam tapes •Built-in up and down converter •Switchable operation: 1080/59.94i, 1080/50i, 1080/29.97PsF or 1080/25PsF •Plays back tapes recorded in 1080/23.98PsF or 1080/24PsF modes •720P output capability(\*) •Long recording time of up to 124 minutes at 1080/59.94i or 149 minutes at 1080/50i on an L-size cassette •Versatile interfaces: HD SDI input/output, SDI output, analog component output, analog composite (NTSC/PAL) output, digital audio (AES/EBU) input/output, analog audio input/output and audio monitor output (2-ch, analog) •Various remote interfaces including RS-422A, RS-232C and 50-pin parallel remote interfaces •Frame-accurate editing •Pre-read editing •High speed color picture search •Dynamic Tracking playback •Digital jog sound •Audio crossfade function •Dynamic Motion Control (DMC) playback •1080/1035 line conversion •Ability to record metadata including Shot mark and UMID •Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached •Selectable picture modes of up/down-converted output: Squeeze, letter box, and edge crop modes •Dolby-E/Dolby AC-3 support •Digital audio and ancillary-data recording •Low power consumption of 220 W •User-friendly control panel •Easy maintenance •"Memory Stick" system

(\*) Converted output

### Supplied Accessories

Operation manual (1)

Installation manual (1)

### Optional Accessories

HKDW-101 Remote Control Panel

HKDW-102 SDTI (HDCAM) Interface Board

BKMW-102 Remote Control Unit

BKMW-103 Control Panel Extension Kit

RMM-131 Rack Mount Kit

RCC-G Cables 9-pin/9-pin Cable

HKDV-900 HD Digital Video Controller

BVR-50 TBC Remote Controller

BCT-HD tapes BCT-HD series HDCAM tapes

BCT-HD12CL tapes Head Cleaning

Videocassette Tapes for HDCAM VTRs

MLB-1M-100 Tele-File Memory Label

\*To connect the HKDV-900 with the HDW-M2000, the optional cable RCC-1505H/1510H/1530H is required.



## HDCAM VTRs

### Specifications

#### General

96.7 mm/s (59.94 Hz), 80.6 mm/s (50 Hz)  
 96.7 mm/s  
 64.5 mm/s (59.94 Hz), 53.8 mm/s (50 Hz)  
 59.6 mm/s  
 118.6 mm/s (59.94 Hz), 101.5 mm (50 Hz)  
 HDCAM: Still to  $\pm 50$  times normal speed playback  
 Digital Betacam: Still to  $\pm 50$  times normal speed playback  
 MPEG IMX: Still to  $\pm 78$  times normal speed playback  
 Betacam SX: Still to  $\pm 78$  times normal speed playback  
 Betacam SP/Betacam: Still to  $\pm 35$  times normal speed playback (59.94 Hz), Still to  $\pm 42$  times normal speed playback (50 Hz)  
 Variable mode  
 HDCAM: -1 to +2 times normal speed playback  
 Digital Betacam: -1 to +3 times normal speed playback  
 MPEG IMX: -1 to +3 times normal speed playback  
 Betacam SX: -1 to +2 times normal speed playback  
 Betacam SP/Betacam: -1 to +3 times normal speed playback  
 Jog mode:  
 Still to  $\pm 1$  times normal speed playback  
 Servo lock time:  
 0.6 s or less (from standby on)  
 Load/unload time:  
 6 s or less (both L and S cassette)

#### Inputs/outputs

HD-SDI input:  
 BNC (1), Serial Digital 1.485 Gb/s, SMPTE 292M  
 Reference video input:  
 BNC (2), (with a loop-through), Tri-level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or black burst  
 Digital audio input (CH 1/2, 3/4):  
 BNC (2), AES/EBU  
 Analog audio input (CH 1/2/3/4/Cue):  
 BNC (2) (with loop-through), AES/EBU  
 XLR 3-pin type, female (5)  
 Low off: -60 dBu, high impedance, balanced  
 High off: +4 dBu, high impedance, balanced  
 High on: +4 dBm, 600  $\Omega$  termination, balanced  
 Time code input:  
 XLR 3-pin type, female (1), 0.5 to 18 Vp-p, 10 k $\Omega$ , balanced  
 HD-SDI output:  
 BNC (3) (SMPTE 292M including one character out), Serial Digital (1.485 Gb/s)  
 SDI output:  
 BNC (3) (SMPTE 259M including one character out), Serial Digital (270 Mb/s)  
 Analog composite output:  
 BNC (3) (RS-170A, including one character out, one WFM out)  
 Y: 1.0 Vp-p, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$   
 Analog component output:  
 BNC (3, for 1 set), 1.0 Vp-p, 75  $\Omega$ , sync negative  
 Digital audio output (CH1/2, 3/4, 5/6, 7/8):  
 BNC (4), AES/EBU

Analog audio output (CH1/2/3/4):  
 XLR 3-pin type (5), male, +4 dBm (600  $\Omega$  load), low impedance, balanced  
 Time code output:  
 XLR 3-pin type, male (1) (2.2 Vp-p, low impedance balanced)  
 Monitor output (L/R):  
 XLR 3-pin type, male (2) (+4 dBm at 600  $\Omega$  load, low impedance, balanced)  
 Headphones:  
 JM-60 stereo phone jack ( $-\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced)  
 Remote 1 input:  
 D-sub 9-pin, Sony 9-pin remote interface  
 Remote 1 output:  
 D-sub 9-pin, Sony 9-pin remote interface  
 RS-232C:  
 D-sub 9-pin  
 Remote 2 Parallel I/O:  
 D-sub 50-pin  
 Video control:  
 D-sub 9-pin, D-sub 15-pin  
 Control panel:  
 D-sub 10-pin, control panel I/O  
 Other:  
 Memory Stick slot

#### Processor adjustment range

Video level:  
 $\pm 3$  dB/ $\infty$  to +3 dB, selectable  
 Chroma level:  
 $\pm 3$  dB/ $\infty$  to +3 dB, selectable  
 Set up/black level:  
 $\pm 3$  IRE  
 Chroma phase/hue:  
 $\pm 30^\circ$   
 System sync phase:  
 $\pm 15$   $\mu$ s  
 System SC phase:  
 $\pm 200$  ns  
 Y/C delay:  
 $\pm 100$  ns

#### Digital video performance

Sampling frequency:  
 Y: 74.25 MHz, R-Y/B-Y: 37.125 MHz  
 Quantization:  
 10 bits/sample (compression 8 bits/sample)  
 Compression:  
 Coefficient recording system  
 Channel coding:  
 S-I-NRZI PR-IV  
 Error correction:  
 Reed-Solomon code

#### Analog component output performance

Bandwidth:  
 Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB  
 S/N ratio:  
 56 dB or more  
 K-factor (2T pulse):  
 1% or less  
**Analog composite output performance**  
 Bandwidth:  
 Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB  
 S/N ratio:  
 53 dB or more  
 Differential gain:  
 2% or less  
 Differential phase:  
 2% or less  
 Y/C delay:  
 20 ns or less

K-factor (2T pulse):  
 1% or less  
 Output SCH phase:  
 Based upon RS-170A/CCIR R.624-3  
**Digital audio performance**  
 Sampling frequency:  
 48 kHz (synchronized with video)  
 Quantization:  
 20 bits/sample  
 Wow and flutter:  
 Below measurable level  
 Headrooms:  
 20 dB (or 18 dB selectable)  
 Emphasis (on/off selectable in REC mode):  
 T1 = 50  $\mu$ s, T2 = 15  $\mu$ s  
**Analog audio output performance**  
 A/D quantization:  
 20 bits/sample  
 D/A quantization:  
 20 bits/sample  
 Frequency response:  
 20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)  
 Dynamic range:  
 More than 95 dB (at 1 kHz emphasis on)  
 Distortion:  
 Less than 0.05% (at 1 kHz, emphasis on, reference level)  
 Crosstalk:  
 Less than -80 dB (at 1 kHz, between any two channels)  
**Cue track**  
 Sampling frequency:  
 100 Hz to 12 kHz  $\pm 3$  dB  
 S/N ratio:  
 More than 45 dB (at 3% distortion level)  
 Distortion:  
 Less than 2% (T.H.D at 1 kHz reference level)  
 Wow and flutter:  
 Less than 0.2% rms  
 Erase ratio:  
 More than 60 dB

## HDCAM VTRs

# HDW-M2000P HDCAM VTR

### Features

●Compact and affordable high-definition VTR ●High picture quality using HDCAM format ●Legacy playback includes Digital Betacam, MPEG IMX, Betacam SX, Betacam SP and Betacam tapes ●Built-in up and down converter ●Switchable operation: 1080/59.94i, 1080/50i, 1080/29.97PsF or 1080/25PsF ●Plays back tapes recorded in 1080/23.98PsF or 1080/24PsF modes ●720P output capability(\*) ●Long recording time of up to 124 minutes at 1080/59.94i or 149 minutes at 1080/50i on an L-size cassette ●Versatile interfaces: HD SDI input/output, SDI output, analog component output, analog composite (NTSC/PAL) output, digital audio (AES/EBU) input/output, analog audio input/output and audio monitor output (2-ch, analog) ●Various remote interfaces including RS-422A, RS-232C and 50-pin parallel remote interfaces ●Frame-accurate editing ●Pre-read editing ●High speed color picture search ●Dynamic Tracking playback ●Digital jog sound ●Audio crossfade function ●Dynamic Motion Control (DMC) playback ●1080/1035 line conversion ●Ability to record metadata including Shot mark and UMID ●Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached ●Selectable picture modes of up/down-converted output: Squeeze, letter box, and edge crop modes ●Dolby-E/Dolby AC-3 support ●Digital audio and ancillary-data recording ●Low power consumption of 220 W ●User-friendly control panel ●Easy maintenance ●"Memory Stick" system

(\*) Converted output

### Supplied Accessories

Operation manual (1)

Installation manual (1)

### Optional Accessories

HKDW-101 Remote Control Panel

HKDW-102 SDTI (HDCAM) Interface Board

BKMW-102 Remote Control Unit

BKMW-103 Control Panel Extension Kit

RMM-131 Rack Mount Kit

RCC-G Cables 9-pin/9-pin Cable

HKDV-900 HD Digital Video Controller

BVR-50 TBC Remote Controller

BCT-HD tapes BCT-HD series HDCAM tapes

BCT-HD12CL tapes Head Cleaning

Videocassette Tapes for HDCAM VTRs

MLB-1M-100 Tele-File Memory Label

\*To connect the HKDV-900 with the HDW-M2000P, the optional cable, RCC-1505H/1510H/1530H is required.



# HDCAM VTRs

## Specifications

### General

Power requirements:

100 to 240 V, 50/60 Hz

Power consumption:

220 W

Operating temperature:

+5 to +40 °C (+41 to +104 °F)

Storage temperature:

-20 to +60 °C (-4 to + 140 °F)

Humidity:

25 to 80% (relative humidity)

Mass:

23 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape Speed

HDCAM:

96.7 mm/s (59.94 Hz), 80.6 mm/s (50 Hz)

Digital Betacam:

96.7 mm/s

MPEG IMX:

64.5 mm/s (59.94 Hz), 53.8 mm/s (50 Hz)

Betacam SX:

59.6 mm/s

Betacam SP/Betacam:

118.6 mm/s (59.94 Hz), 101.5 mm (50 Hz)

HDCAM recording/playback time

(59.94/50/29.97PsF/25PsF):

124 minutes (59.94/29.97PsF, with BCT-124HDL cassette)

149 minutes (50/25PsF, with BCT-124HDL cassette)

40 minutes (59.94/29.97PsF, with BCT-40HD cassette)

48 minutes (50/25PsF, with BCT-40HD cassette)

HDCAM playback time (24PsF, 23.98PsF):

155 minutes (with BCT-124HDL cassette)

50 minutes (with BCT-40HD cassette)

Fast forward/rewind time:

Approx. 3 min with BCT-124HDL cassette

Search speed range

Shuttle mode

HDCAM: Still to  $\pm 50$  times normal speed playback

Digital Betacam: Still to  $\pm 50$  times normal speed playback

MPEG IMX: Still to  $\pm 78$  times normal speed playback

Betacam SX: Still to  $\pm 78$  times normal speed playback

Betacam SP/Betacam: Still to  $\pm 35$  times normal speed playback (59.94 Hz), Still to  $\pm 42$  times normal speed playback (50 Hz)

Variable mode

HDCAM: -1 to +2 times normal speed playback

Digital Betacam: -1 to +3 times normal speed playback

MPEG IMX: -1 to +3 times normal speed playback

Betacam SX: -1 to +2 times normal speed playback

Betacam SP/Betacam: -1 to +3 times normal speed playback

Jog mode:

Still to  $\pm 1$  times normal speed playback

Servo lock time:

0.6 s or less (from standby on)

Load/unload time:

6 s or less (both L and S cassette)

### Inputs/outputs

HD-SDI input:

BNC (1), Serial Digital 1.485 Gb/s, SMPTE 292M

Reference video input:

BNC (2), (with a loop-through), Tri-level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or black burst

Digital audio input (CH 1/2, 3/4):

BNC (2), AES/EBU

Analog audio input (CH 1/2/3/4/Cue):

BNC (2)(with loop-through), AES/EBU

XLR 3-pin type, female (5)

Low off: -60 dBu, high impedance, balanced

High off: +4 dBu, high impedance, balanced

High on: +4 dBm, 600  $\Omega$  termination, balanced

Time code input:

XLR 3-pin type, female (1), 0.5 to 18 Vp-p, 10 k $\Omega$ , balanced

HD-SDI output:

BNC (3) (SMPTE 292M including one character out), Serial Digital (1.485 Gb/s)

SDI output:

BNC (3) (SMPTE 259M including one character out), Serial Digital (270 Mb/s)

Analog composite output:

BNC (3) (RS-170A, including one character out, one WFM out)

Y: 1.0 Vp-p, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$

Analog component output:

BNC (3, for 1 set) 1.0 Vp-p, 75  $\Omega$ , sync negative

Digital audio output (CH1/2, 3/4, 5/6, 7/8):

BNC (4), AES/EBU

Analog audio output (CH1/2/3/4):

XLR 3-pin type, (5), male, +4 dBm (600  $\Omega$  load), low impedance, balanced

Time code output:

XLR 3-pin type, male (1) (2.2 Vp-p, low impedance balanced)

Monitor output (L/R):

XLR 3-pin type, male, (2) (+4 dBm at 600  $\Omega$  load, low impedance, balanced)

Headphones:

JM-60 stereo phone jack (- $\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced)

Remote 1 input:

D-sub 9-pin, Sony 9-pin remote interface

Remote 1 output:

D-sub 9-pin, Sony 9-pin remote interface

RS-232C:

D-sub 9-pin

Remote 2 Parallel I/O:

D-sub 50-pin

Video control:

D-sub 9-pin, D-sub 15-pin

Control panel:

D-sub 10-pin, control panel I/O

Other:

Memory Stick slot

### Processor adjustment range

Video level:

$\pm 3$  dB/ $\infty$  to +3 dB, selectable

Chroma level:

$\pm 3$  dB/ $\infty$  to +3 dB, selectable

Set up/black level:

$\pm 3$  IRE

Chroma phase/hue:

$\pm 30^\circ$

System sync phase:

$\pm 15 \mu$ s

System SC phase:

$\pm 200$  ns

Y/C delay:

$\pm 100$  ns

### Digital video performance

Sampling frequency:

Y: 74.25 MHz, R-Y/B-Y: 37.125 MHz

Quantization:

10 bits/sample (compression 8 bits/sample)

Compression:

Coefficient recording system

Channel coding:

S-I-NRZI PR-IV

Error correction:

Reed-Solomon code

### Analog component output performance

Bandwidth:

Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:

56 dB or more

K-factor (2T pulse):

1% or less

### Analog composite output performance

Bandwidth:

Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:

53 dB or more

Differential gain:

2% or less

Differential phase:

2% or less

Y/C delay:

20 ns or less

K-factor (2T pulse):

1% or less

Output SCH phase:

Based upon RS-170A/CCIR R.624-3

### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

20 bits/sample

Wow and flutter:

Below measurable level

Headrooms:

20 dB (or 18 dB selectable)

Emphasis (on/off selectable in REC mode):

T1 = 50  $\mu$ s, T2 = 15  $\mu$ s

### Analog audio output performance

A/D quantization:

20 bits/sample

D/A quantization:

20 bits/sample

Frequency response:

20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)

Dynamic range:

More than 95 dB (at 1 kHz emphasis on)

Distortion:

Less than 0.05% (at 1 kHz, emphasis on, reference level)

Crosstalk:

Less than -80 dB (at 1 kHz, between any two channels)

### Cue track

Sampling frequency:

100 Hz to 12 kHz  $\pm 3$  dB

S/N ratio:

More than 45 dB (at 3% distortion level)

Distortion:

Less than 2% (T.H.D at 1 kHz reference level)

Wow and flutter:

Less than 0.2% rms

Erase ratio:

More than 60 dB

## HDCAM VTRs

# HDW-D2000 HDCAM Recorder

### Features

●Compact and affordable high-definition VTR ●High picture quality using HDCAM format ●Legacy playback includes Digital Betacam and MPEG IMX ●Built-in up and down converter ●Switchable operation: 1080/59.94i, 1080/50i, 1080/29.97PsF or 1080/25PsF ●Plays back tapes recorded in 1080/23.98PsF or 1080/24PsF modes ●720P output(\*) capability ●Long recording time of up to 124 minutes at 1080/59.94i or 149 minutes at 1080/50i on an L-size cassette ●Versatile interfaces: HD SDI input/output, SDI output, analog component output, analog composite (NTSC/PAL) output, digital audio (AES/EBU) input/output, analog audio input/output and audio monitor output (2-ch, analog) ●Various remote interfaces including RS-422A, RS-232C and 50-pin parallel remote interfaces ●Frame-accurate editing ●Pre-read editing ●High speed color picture search ●Dynamic Tracking playback ●Digital jog sound ●Audio crossfade function ●Dynamic Motion Control (DMC) playback ●1080/1035 line conversion ●Ability to record metadata including Shot mark and UMID ●Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached ●Selectable picture modes of up/down-converted output: Squeeze, letter box, and edge crop modes ●Dolby-E/Dolby AC-3 support ●Digital audio and ancillary-data recording ●Low power consumption of 220 W ●User-friendly control panel ●Easy maintenance ●"Memory Stick" system to store/recall setup files

(\*) Converted output

### Supplied Accessories

Operation manual (1)

Installation manual (1)

### Optional Accessories

HKDW-101 Remote Control Panel

HKDW-102 SDTI (HDCAM) Interface Board

BKMW-102 Remote Control Unit

BKMW-103 Control Panel Extension Kit

RMM-131 Rack Mount Kit

RCC-G Cables 9-pin/9-pin Cable

HKDV-900 HD Digital Video Controller

BVR-50 TBC Remote Controller

BCT-HD tapes BCT-HD series HDCAM tapes

BCT-HD12CL tapes Head Cleaning

Videocassette Tapes for HDCAM VTRs

MLB-1M-100 Tele-File Memory Label

\*To connect the HKDV-900 with the HDW-2000, the optional cable, RCC-1505H/1510H/1530H is required.



# HDCAM VTRs

## Specifications

### General

Power requirements:  
100 to 240 V, 50/60 Hz

Power consumption:  
220 W

Operating temperature:  
+5 to +40 °C (+41 to +104 °F)

Storage temperature:  
-20 to +60 °C (-4 to + 140 °F)

Humidity:  
25 to 80% (relative humidity)

Mass:  
23 kg (50 lb 11 oz)

Dimensions:  
427 (W) x 174 (H) x 544 (D) mm  
(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed:

HDCAM:  
96.7 mm/s (59.94 Hz), 80.6 mm/s (50 Hz)

Digital Betacam:  
96.7 mm/s

MPEG IMX:  
64.5 mm/s (59.94 Hz), 53.8 mm/s (50 Hz)

HDCAM recording/playback time (59.94i/50i/29.97PsF/25PsF):

124 minutes (59.94i/29.97PsF, with BCT-124HDL cassette)

149 minutes (50i/25PsF, with BCT-124HDL cassette)

40 minutes (59.94i/29.97PsF, with BCT-40HD cassette)

48 minutes (50i/25PsF, with BCT-40HD cassette)

HDCAM playback time (24PsF, 23.98PsF)

155 minutes (with BCT-124HDL cassette)

50 minutes (with BCT-40HD cassette)

Fast forward/rewind time:  
Approx. 3 min with BCT-124HDL cassette

Search speed range

Shuttle mode:

HDCAM: Still to ±50 times normal speed playback

Digital Betacam: Still to ±50 times normal speed playback

MPEG IMX: Still to ±78 times normal speed playback

Variable mode:

HDCAM: -1 to +2 times normal speed playback

Digital Betacam: -1 to +3 times normal speed playback

MPEG IMX: -1 to +3 times normal speed playback

Jog mode:  
Still to ±1 times normal speed playback

Servo lock time:  
0.6 s or less (from standby on)

Load/unload time:  
6 s or less (both L and S cassette)

**Inputs/outputs**

HD-SDI input:  
BNC (1), Serial Digital 1.485 Gb/s, SMPTE 292M

Reference video input:  
BNC (2) (with a loop-through), Tri-level sync, 0.6 Vp-p, 75 Ω, sync negative or black burst

Digital audio input (CH 1/2, 3/4):  
BNC (2), AES/EBU

Analog audio input (CH 1/2/3/4/Cue):  
BNC (2) (with loop-through), AES/EBU  
XLR 3-pin type, female (5)  
Low off: -60 dBu, high impedance, balanced  
High off: +4 dBu, high impedance, balanced  
High on: +4 dBm, 600 Ω termination, balanced

Time code input:  
XLR 3-pin type, female, x1, 0.5 to 18 Vp-p, 10 kΩ, balanced

HD-SDI output:  
BNC (3) (SMPTE 292M including one character out), Serial Digital (1.485 Gb/s)

SDI output:  
BNC (3) (SMPTE 259M including one character out), Serial Digital (270 Mb/s)

Analog composite output:  
BNC (3) (RS-170A, including one character out, one WFM out)  
Y: 1.0 Vp-p, sync negative, R-Y/B-Y: 0.7 Vp-p, 75Ω

Analog component output:  
BNC (3), for 1 set, 1.0 Vp-p, 75 Ω, sync negative

Digital audio output (CH1/2, 3/4, 5/6, 7/8):  
BNC (4), AES/EBU

Analog audio output (CH1/2/3/4):  
XLR 3-pin type (5), male, +4 dBm (600 Ω load), low impedance, balanced

Time code output:  
XLR 3-pin type, male (1) (2.2 Vp-p, low impedance balanced)

Monitor output (L/R):  
XLR 3-pin type, male (2) (+4 dBm at 600 Ω load, low impedance, balanced)

Headphones:  
JM-60 stereo phone jack (-∞ to -12 dBu at 8 Ω load, unbalanced)

Remote 1 input:  
D-sub 9-pin, Sony 9-pin remote interface

Remote 1 output:  
D-sub 9-pin, Sony 9-pin remote interface

RS-232C:  
D-sub 9-pin

Remote 2 Parallel I/O:  
D-sub 50-pin

Video control:  
D-sub 9-pin, D-sub 15-pin

Control panel:  
D-sub 10-pin, control panel I/O

Other:  
Memory Stick slot

**Processor adjustment range**

Video level:  
±3 dB/∞ to +3 dB, selectable

Chroma level:  
±3 dB/∞ to +3 dB, selectable

Set up/black level:  
±3 IRE

Chroma phase/hue:  
±30°

System sync phase:  
±15 μs

System SC phase:  
±200 ns

**Digital video performance**

Sampling frequency:  
Y: 74.25 MHz, R-Y/B-Y: 37.125 MHz

Quantization:  
10 bits/sample (compression 8 bits/sample)

Compression:  
Coefficient recording system

Channel coding:  
S-I-NRZI PR-IV

Error correction:  
Reed-Solomon code

**Analog component output performance**

Bandwidth:  
Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:  
56 dB or more

K-factor (2T pulse):  
1% or less

**Analog composite output performance**

Bandwidth:  
Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:  
53 dB or more

Differential gain:  
2% or less

Differential phase:  
2% or less

Y/C delay:  
20 ns or less

K-factor (2T pulse):  
1% or less

Output SCH phase:  
Based upon RS-170A/CCIR R.624-3

**Digital audio performance**

Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
20 bits/sample

Wow and flutter:  
Below measurable level

Headrooms:  
20 dB (or 18 dB selectable)

Emphasis (on/off selectable in REC mode):  
T1 = 50 μs, T2 = 15 μs

**Analog audio output performance**

A/D quantization:  
20 bits/sample

D/A quantization:  
20 bits/sample

Frequency response:  
20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)

Dynamic range:  
More than 95 dB (at 1 kHz emphasis on)

Distortion:  
Less than 0.05% (at 1 kHz, emphasis on, reference level)

Crosstalk:  
Less than -80 dB (at 1 kHz, between any two channels)

**Cue track**

Sampling frequency:  
100 Hz to 12 kHz ±3 dB

S/N ratio:  
More than 45 dB (at 3% distortion level)

Distortion:  
Less than 2% (T.H.D at 1 kHz reference level)

Wow and flutter:  
Less than 0.2% rms

Erase ratio:  
More than 60 dB

## HDCAM VTRs

# HDW-S2000 HDCAM Recorder

### Features

- Compact and affordable high-definition VTR
- High picture quality using HDCAM format
- Legacy playback includes Betacam SX, Betacam SP and Betacam
- Built-in up and down converter
- Switchable operation: 1080/59.94i, 1080/50i, 1080/29.97PsF or 1080/25PsF
- Plays back tapes recorded in 1080/23.98PsF or 1080/24PsF modes
- 720P output(\*) capability
- Long recording time of up to 124 minutes at 1080/59.94i or 149 minutes at 1080/50i on an L-size cassette
- Versatile interfaces: HD SDI input/output, SDI output, analog component output, analog composite (NTSC/PAL) output, digital audio (AES/EBU) input/output, analog audio input/output and audio monitor output (2-ch, analog)
- Various remote interfaces including RS-422A, RS-232C and 50-pin parallel remote interfaces
- Frame-accurate editing
- Pre-read editing
- High speed color picture search
- Dynamic Tracking playback
- Digital jog sound
- Audio crossfade function
- Dynamic Motion Control (DMC) playback
- 1080/1035 line conversion
- Ability to record metadata including Shot mark and UMID
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Selectable picture modes of up/down-converted output: Squeeze, letter box, and edge crop modes
- Dolby-E/Dolby AC-3 support
- Digital audio and ancillary-data recording
- Low power consumption of 220 W
- User-friendly control panel
- Easy maintenance
- "Memory Stick" system to store/recall setup files

(\*) Converted output

### Supplied Accessories

Operation manual (1)

Installation manual (1)

### Optional Accessories

HKDW-101 Remote Control Panel

HKDW-102 SDTI (HDCAM) Interface Board

BKMW-102 Remote Control Unit

BKMW-103 Control Panel Extension Kit

RMM-131 Rack Mount Kit

RCC-G Cables 9-pin/9-pin Cable

HKDV-900 HD Digital Video Controller

BVR-50 TBC Remote Controller

BCT-HD tapes BCT-HD series HDCAM tapes

BCT-HD12CL tapes Head Cleaning

Videocassette Tapes for HDCAM VTRs

MLB-1M-100 Tele-File Memory Label

\*To connect the HKDV-900 with the HDW-2000, the optional cable, RCC-1505H/1510H/1530H is required.



# HDCAM VTRs

## Specifications

### General

Power requirements:

100 to 240 V, 50/60 Hz

Power consumption:

220 W

Operating temperature:

+5 to +40 °C (+41 to +104 °F)

Storage temperature:

-20 to +60 °C (-4 to + 140 °F)

Humidity:

25 to 80% (relative humidity)

Mass:

23 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed:

HDCAM:

96.7 mm/s (59.94 Hz), 80.6 mm/s (50

Hz)

Betacam SX:

59.6 mm/s

Betacam SP/Betacam:

118.6 mm/s (59.94 Hz), 101.5 mm (50

Hz)

HDCAM recording/playback time

(59.94i/50i/29.97PsF/25PsF):

124 minutes (59.94i/29.97PsF, with

BCT-124HDL cassette)

149 minutes (50i/25PsF, with BCT-124HDL

cassette)

40 minutes (59.94i/29.97PsF, with

BCT-40HD cassette)

48 minutes (50i/25PsF, with BCT-40HD

cassette)

HDCAM playback time (24PsF, 23.98PsF)

155 minutes (with BCT-124HDL cassette)

50 minutes (with BCT-40HD cassette)

Fast forward/rewind time:

Approx. 3 min with BCT-124HDL cassette

Search speed range

Shuttle mode:

HDCAM: Still to  $\pm 50$  times normal

speed playback

Betacam SX: Still to  $\pm 78$  times normal

speed playback

Betacam SP/Betacam: Still to  $\pm 35$  times

normal speed playback (59.94 Hz); Still

to  $\pm 42$  times normal speed playback

(50 Hz)

Variable mode:

HDCAM: -1 to +2 times normal speed

playback

Betacam SX: -1 to +2 times normal

speed playback

Betacam SP/Betacam: -1 to +3 times

normal speed playback

Jog mode:

Still to  $\pm 1$  times normal speed playback

Servo lock time:

0.6 s or less (from standby on)

Load/unload time:

6 s or less (both L and S cassette)

### Inputs/outputs

HD-SDI input:

BNC (1), Serial Digital 1.485 Gb/s, SMPTE 292M

Reference video input:

BNC (2) (with a loop-through), Tri-level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or black burst

Digital audio input (CH 1/2, 3/4):

BNC (2), AES/EBU

Analog audio input (CH 1/2/3/4/Cue):

BNC (2) (with loop-through), AES/EBU

XLR 3-pin type, female (5)

Low off: -60 dBu, high impedance, balanced

High off: +4 dBu, high impedance, balanced

High on: +4 dBm, 600  $\Omega$  termination, balanced

Time code input:

XLR 3-pin type, female, x1, 0.5 to 18 Vp-p, 10 k $\Omega$ , balanced

HD-SDI output:

BNC (3) (SMPTE 292M including one character out), Serial Digital (1.485 Gb/s)

SDI output:

BNC (3) (SMPTE 259M including one character out), Serial Digital (270 Mb/s)

Analog composite output:

BNC (3) (RS-170A, including one character out, one WFM out)

Y: 1.0 Vp-p, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 $\Omega$

Analog component output:

BNC (3), for 1 set, 1.0 Vp-p, 75  $\Omega$ , sync negative

Digital audio output (CH1/2, 3/4):

BNC (2), AES/EBU

Analog audio output (CH1/2/3/4):

XLR 3-pin type (5), male, +4 dBm (600  $\Omega$  load), low impedance, balanced

Time code output:

XLR 3-pin type, male (1) (2.2 Vp-p, low impedance balanced)

Monitor output (L/R):

XLR 3-pin type, male (2) (+4 dBm at 600  $\Omega$  load, low impedance, balanced)

Headphones:

JM-60 stereo phone jack ( $\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced)

Remote 1 input:

D-sub 9-pin, Sony 9-pin remote interface

Remote 1 output:

D-sub 9-pin, Sony 9-pin remote interface

RS-232C:

D-sub 9-pin

Remote 2 Parallel I/O:

D-sub 50-pin

Video control:

D-sub 9-pin, D-sub 15-pin

Control panel:

D-sub 10-pin, control panel I/O

Other:

Memory Stick slot

### Processor adjustment range

Video level:

$\pm 3$  dB/ $\infty$  to +3 dB, selectable

Chroma level:

$\pm 3$  dB/ $\infty$  to +3 dB, selectable

Set up/black level:

$\pm 3$  IRE

Chroma phase/hue:

$\pm 30^\circ$

System sync phase:

$\pm 15$   $\mu$ s

System SC phase:

$\pm 200$  ns

### Digital video performance

Sampling frequency:

Y: 74.25 MHz, R-Y/B-Y: 37.125 MHz

Quantization:

10 bits/sample (compression 8 bits/sample)

Compression:

Coefficient recording system

Channel coding:

S-I-NRZI PR-IV

Error correction:

Reed-Solomon code

### Analog component output performance

Bandwidth:

Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y:

0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:

56 dB or more

K-factor (2T pulse):

1% or less

### Analog composite output performance

Bandwidth:

Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y:

0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:

53 dB or more

Differential gain:

2% or less

Differential phase:

2% or less

Y/C delay:

20 ns or less

K-factor (2T pulse):

1% or less

Output SCH phase:

Based upon RS-170A/CCIR R.624-3

### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

20 bits/sample

Wow and flutter:

Below measurable level

Headrooms:

20 dB (or 18 dB selectable)

Emphasis (on/off selectable in REC mode):

T1 = 50  $\mu$ s, T2 = 15  $\mu$ s

### Analog audio output performance

A/D quantization:

20 bits/sample

D/A quantization:

20 bits/sample

Frequency response:

20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)

Dynamic range:

More than 95 dB (at 1 kHz emphasis on)

Distortion:

Less than 0.05% (at 1 kHz, emphasis on, reference level)

Crosstalk:

Less than -80 dB (at 1 kHz, between any two channels)

### Cue track

Sampling frequency:

100 Hz to 12 kHz  $\pm 3$  dB

S/N ratio:

More than 45 dB (at 3% distortion level)

Distortion:

Less than 2% (T.H.D at 1 kHz reference level)

Wow and flutter:

Less than 0.2% rms

Erase ratio:

More than 60 dB

## HDCAM VTRs

# HDW-S2000P HDCAM Recorder

### Features

- Compact and affordable high-definition VTR
- High picture quality using HDCAM format
- Legacy playback includes Betacam SX, Betacam SP and Betacam
- Built-in up and down converter
- Switchable operation: 1080/59.94i, 1080/50i, 1080/29.97PsF or 1080/25PsF
- Plays back tapes recorded in 1080/23.98PsF or 1080/24PsF modes
- 720P output(\*) capability
- Long recording time of up to 124 minutes at 1080/59.94i or 149 minutes at 1080/50i on an L-size cassette
- Versatile interfaces: HD SDI input/output, SDI output, analog component output, analog composite (NTSC/PAL) output, digital audio (AES/EBU) input/output, analog audio input/output and audio monitor output (2-ch, analog)
- Various remote interfaces including RS-422A, RS-232C and 50-pin parallel remote interfaces
- Frame-accurate editing
- Pre-read editing
- High speed color picture search
- Dynamic Tracking playback
- Digital jog sound
- Audio crossfade function
- Dynamic Motion Control (DMC) playback
- 1080/1035 line conversion
- Ability to record metadata including Shot mark and UMID
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Selectable picture modes of up/down-converted output: Squeeze, letter box, and edge crop modes
- Dolby-E/Dolby AC-3 support
- Digital audio and ancillary-data recording
- Low power consumption of 220 W
- User-friendly control panel
- Easy maintenance
- "Memory Stick" system to store/recall setup files

(\*) Converted output

### Supplied Accessories

Operation manual (1)

Installation manual (1)

### Optional Accessories

HKDW-101 Remote Control Panel

HKDW-102 SDTI (HDCAM) Interface Board

BKMW-102 Remote Control Unit

BKMW-103 Control Panel Extension Kit

RMM-131 Rack Mount Kit

RCC-G Cables 9-pin/9-pin Cable

HKDV-900 HD Digital Video Controller

BVR-50 TBC Remote Controller

BCT-HD tapes BCT-HD series HDCAM tapes

BCT-HD12CL tapes Head Cleaning

Videocassette Tapes for HDCAM VTRs

MLB-1M-100 Tele-File Memory Label

\*To connect the HKDV-900 with the HDW-2000, the optional cable, RCC-1505H/1510H/1530H is required.



# HDCAM VTRs

## Specifications

### General

Power requirements:  
100 to 240 V, 50/60 Hz

Power consumption:  
220 W

Operating temperature:  
+5 to +40 °C (+41 to +104 °F)

Storage temperature:  
-20 to +60 °C (-4 to + 140 °F)

Humidity:  
25 to 80% (relative humidity)

Mass:  
23 kg (50 lb 11 oz)

Dimensions:  
427 (W) x 174 (H) x 544 (D) mm  
(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed:  
HDCAM:  
96.7 mm/s (59.94 Hz), 80.6 mm/s (50 Hz)  
Betacam SX:  
59.6 mm/s  
Betacam SP/Betacam:  
118.6 mm/s (59.94 Hz), 101.5 mm (50 Hz)

HDCAM recording/playback time (59.94i/50i/29.97PsF/25PsF):  
124 minutes (59.94i/29.97PsF, with BCT-124HDL cassette)  
149 minutes (50i/25PsF, with BCT-124HDL cassette)  
40 minutes (59.94i/29.97PsF, with BCT-40HD cassette)  
48 minutes (50i/25PsF, with BCT-40HD cassette)

HDCAM playback time (24PsF/23.98PsF):  
155 minutes (with BCT-124HDL cassette)  
50 minutes (with BCT-40HD cassette)

Fast forward/rewind time:  
Approx. 3 min with BCT-124HDL cassette

Search speed range  
Shuttle mode  
HDCAM: Still to  $\pm 50$  times normal speed playback  
Betacam SX: Still to  $\pm 78$  times normal speed playback  
Betacam SP/Betacam: Still to  $\pm 35$  times normal speed playback (59.94 Hz); Still to  $\pm 42$  times normal speed playback (50 Hz)

Variable mode  
HDCAM: -1 to +2 times normal speed playback  
Betacam SX: -1 to +2 times normal speed playback  
Betacam SP/Betacam: -1 to +3 times normal speed playback

Jog mode:  
Still to  $\pm 1$  times normal speed playback

Servo lock time:  
0.6 s or less (from standby on)

Load/unload time:  
6 s or less (both L and S cassette)

**Inputs/outputs**

HD-SDI input:  
BNC (1), Serial Digital 1.485 Gb/s, SMPTE 292M

Reference video input:  
BNC (2) (with a loop-through), Tri-level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or black burst

Digital audio input (CH 1/2, 3/4):  
BNC (2), AES/EBU

Analog audio input (CH 1/2/3/4/Cue):  
BNC (2) (with loop-through), AES/EBU  
XLR 3-pin type, female (5)  
Low off: -60 dBu, high impedance, balanced  
High off: +4 dBu, high impedance, balanced  
High on: +4 dBm, 600  $\Omega$  termination, balanced

Time code input:  
XLR 3-pin type, female, x1, 0.5 to 18 Vp-p, 10 k $\Omega$ , balanced

HD-SDI output:  
BNC (3) (SMPTE 292M including one character out), Serial Digital (1.485 Gb/s)

SDI output:  
BNC (3) (SMPTE 259M including one character out), Serial Digital (270 Mb/s)

Analog composite output:  
BNC (3) (RS-170A, including one character out, one WFM out)  
Y: 1.0 Vp-p, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 $\Omega$

Analog component output:  
BNC (3), for 1 set, 1.0 Vp-p, 75  $\Omega$ , sync negative

Digital audio output (CH1/2, 3/4):  
BNC (2), AES/EBU

Analog audio output (CH1/2/3/4):  
XLR 3-pin type (5), male, +4 dBm (600  $\Omega$  load), low impedance, balanced

Time code output:  
XLR 3-pin type, male (1) (2.2 Vp-p, low impedance balanced)

Monitor output (L/R):  
XLR 3-pin type, male (2) (+4 dBm at 600  $\Omega$  load, low impedance, balanced)

Headphones:  
JM-60 stereo phone jack ( $\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced)

Remote 1 input:  
D-sub 9-pin, Sony 9-pin remote interface

Remote 1 output:  
D-sub 9-pin, Sony 9-pin remote interface

RS-232C:  
D-sub 9-pin

Remote 2 Parallel I/O:  
D-sub 50-pin

Video control:  
D-sub 9-pin, D-sub 15-pin

Control panel:  
D-sub 10-pin, control panel I/O

Other:  
Memory Stick slot

**Processor adjustment range**

Video level:  
 $\pm 3$  dB/ $\infty$  to +3 dB, selectable

Chroma level:  
 $\pm 3$  dB/ $\infty$  to +3 dB, selectable

Set up/black level:  
 $\pm 3$  IRE

Chroma phase/hue:  
 $\pm 30^\circ$

System sync phase:  
 $\pm 15$   $\mu$ s

System SC phase:  
 $\pm 200$  ns

**Digital video performance**

Sampling frequency:  
Y: 74.25 MHz, R-Y/B-Y: 37.125 MHz

Quantization:  
10 bits/sample (compression 8 bits/sample)

Compression:  
Coefficient recording system

Channel coding:  
S-I-NRZI PR-IV

Error correction:  
Reed-Solomon code

**Analog component output performance**

Bandwidth:  
Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:  
56 dB or more

K-factor (2T pulse):  
1% or less

**Analog composite output performance**

Bandwidth:  
Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:  
53 dB or more

Differential gain:  
2% or less

Differential phase:  
2% or less

Y/C delay:  
20 ns or less

K-factor (2T pulse):  
1% or less

Output SCH phase:  
Based upon RS-170A/CCIR R.624-3

**Digital audio performance**

Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
20 bits/sample

Wow and flutter:  
Below measurable level

Headrooms:  
20 dB (or 18 dB selectable)

Emphasis (on/off selectable in REC mode):  
T1 = 50  $\mu$ s, T2 = 15  $\mu$ s

**Analog audio output performance**

A/D quantization:  
20 bits/sample

D/A quantization:  
20 bits/sample

Frequency response:  
20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)

Dynamic range:  
More than 95 dB (at 1 kHz emphasis on)

Distortion:  
Less than 0.05% (at 1 kHz, emphasis on, reference level)

Crosstalk:  
Less than -80 dB (at 1 kHz, between any two channels)

**Cue track**

Sampling frequency:  
100 Hz to 12 kHz  $\pm 3$  dB

S/N ratio:  
More than 45 dB (at 3% distortion level)

Distortion:  
Less than 2% (T.H.D at 1 kHz reference level)

Wow and flutter:  
Less than 0.2% rms

Erase ratio:  
More than 60 dB

## HDCAM VTRs

# HDW-2000 HDCAM VTR

### Features

- Compact and affordable high-definition videocassette VTR
- High picture quality using HDCAM format
- Built-in down converter
- Switchable operation: 1080/59.94i, 1080/50i, 1080/29.97PsF or 1080/25PsF
- Plays back tapes recorded in 1080/23.98PsF or 1080/24PsF modes
- 720P output capability(\*)
- Long recording time of up to 124 minutes at 1080/59.94i or 149 minutes at 1080/50i on an L-size cassette
- Versatile interfaces: HD SDI input/output, SDI output, analog component output, analog composite (NTSC/PAL) output, digital audio (AES/EBU) input/output, analog audio input/output and audio monitor output (2-ch, analog)
- Various remote interfaces including RS-422A, RS-232C and 50-pin parallel remote interfaces
- Frame-accurate editing
- Pre-read editing
- High speed color picture search
- Dynamic Tracking playback
- Digital jog sound
- Audio crossfade function
- Dynamic Motion Control (DMC) playback
- 1080/1035 line conversion
- Ability to record metadata including Shot mark and UMID
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Selectable picture modes of up/down-converted output: Squeeze, letter box, and edge crop modes
- Dolby-E/Dolby AC-3 support
- Digital audio and ancillary-data recording
- Low power consumption of 220 W
- User-friendly control panel
- Easy maintenance
- "Memory Stick" system to store/recall setup files

(\*) Converted output

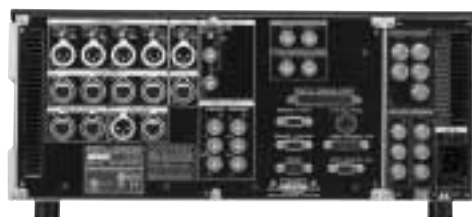
### Supplied Accessories

Operation manual (1)  
Installation manual (1)

### Optional Accessories

HKDW-101 Remote Control Panel  
HKDW-102 SDTI (HDCAM) Interface Board  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
RMM-131 Rack Mount Kit  
RCC-G Cables 9-pin/9-pin Cable  
HKDV-900 HD Digital Video Controller  
BVR-50 TBC Remote Controller  
BCT-HD tapes BCT-HD series HDCAM tapes  
BCT-HD12CL tapes Head Cleaning  
Videocassette Tapes for HDCAM VTRs  
MLB-1M-100 Tele-File Memory Label

\*To connect the HKDV-900 with the HDW-2000, the optional cable, RCC-1505H/1510H/1530H is required.



# HDCAM VTRs

## Specifications

### General

Power requirements:

100 to 240 V, 50/60 Hz

Power consumption:

220 W

Operating temperature:

+5 to +40 °C (+41 to +104 °F)

Storage temperature:

-20 to +60 °C (-4 to + 140 °F)

Humidity:

25 to 80% (relative humidity)

Mass:

23 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm  
(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed:

96.7 mm/s (59.94 Hz), 80.6 mm/s (50 Hz)

HDCAM recording/playback time

(59.94i/50i/29.97PsF/25PsF):

124 minutes (59.94i/29.97PsF, with

BCT-124HDL cassette)

149 minutes (50i/25PsF, with BCT-124HDL

cassette)

40 minutes (59.94i/29.97PsF, with

BCT-40HD cassette)

48 minutes (50i/25PsF, with BCT-40HD

cassette)

HDCAM playback time (24PsF, 23.98PsF):

155 minutes (with BCT-124HDL cassette)

50 minutes (with BCT-40HD cassette)

Fast forward/rewind time:

Approx. 3 min with BCT-124HDL cassette

Search speed range

Shuttle mode:

Still to  $\pm 50$  times normal speed

playback

Variable mode:

-1 to +2 times normal speed playback

Jog mode:

Still to  $\pm 1$  times normal speed playback

Servo lock time:

0.6 s or less (from standby on)

Load/unload time:

6 s or less (both L and S cassette)

### Inputs/outputs

HD-SDI input:

BNC (1), Serial Digital 1.485 Gb/s, SMPTE  
292M

Reference video input:

BNC (2) (with a loop-through), Tri-level  
sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or  
black burst

Digital audio input (CH 1/2, 3/4):

BNC (2), AES/EBU

Analog audio input (CH 1/2/3/4/Cue):

BNC (2) (with loop-through), AES/EBU

XLR 3-pin type, female (5)

Low off: -60 dBu, high impedance,  
balanced

High off: +4 dBu, high impedance,  
balanced

High on: +4 dBm, 600  $\Omega$  termination,  
balanced

Time code input:

XLR 3-pin type, female, x1, 0.5 to 18 Vp-p,  
10 k $\Omega$ , balanced

HD-SDI output:

BNC (3) (SMPTE 292M including one  
character out), Serial Digital (1.485 Gb/s)

SDI output:

BNC (3) (SMPTE 259M including one  
character out), Serial Digital (270 Mb/s)

Analog composite output:

BNC (3) (RS-170A, including one character  
out, one WFM out)

Y: 1.0 Vp-p, sync negative, R-Y/B-Y: 0.7  
Vp-p, 75  $\Omega$

Analog component output:

BNC (3), for 1 set, 1.0 Vp-p, 75  $\Omega$ , sync  
negative

Digital audio output (CH1/2, 3/4):

BNC (2), AES/EBU

Analog audio output (CH1/2/3/4):

XLR 3-pin type (5), male, +4 dBm (600  $\Omega$   
load), low impedance, balanced

Time code output:

XLR 3-pin type, male (1) (2.2 Vp-p, low  
impedance balanced)

Monitor output (L/R):

XLR 3-pin type, male (2) (+4 dBm at 600  $\Omega$   
load, low impedance, balanced)

Headphones:

JM-60 stereo phone jack ( $\infty$  to -12 dBu at  
8  $\Omega$  load, unbalanced)

Remote 1 input:

D-sub 9-pin, Sony 9-pin remote interface

Remote 1 output:

D-sub 9-pin, Sony 9-pin remote interface

RS-232C:

D-sub 9-pin

Remote 2 Parallel I/O:

D-sub 50-pin

Video control:

D-sub 9-pin, D-sub 15-pin

Control panel:

D-sub 10-pin, control panel I/O

Other:

Memory Stick slot

### Processor adjustment range

Video level:

$\pm 3$  dB/ $\infty$  to +3 dB, selectable

Chroma level:

$\pm 3$  dB/ $\infty$  to +3 dB, selectable

Set up/black level:

$\pm 3$  IRE

Chroma phase/hue:

$\pm 30^\circ$

System sync phase:

$\pm 15$   $\mu$ s

System SC phase:

$\pm 200$  ns

### Digital video performance

Sampling frequency:

Y: 74.25 MHz, R-Y/B-Y: 37.125 MHz

Quantization:

10 bits/sample (compression 8  
bits/sample)

Compression:

Coefficient recording system

Channel coding:

S-I-NRZI PR-IV

Error correction:

Reed-Solomon code

### Analog component output performance

Bandwidth:

Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y:  
0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:

56 dB or more

K-factor (2T pulse):

1% or less

### Analog composite output performance

Bandwidth:

Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y:  
0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:

53 dB or more

Differential gain:

2% or less

Differential phase:

2% or less

Y/C delay:

20 ns or less

K-factor (2T pulse):

1% or less

Output SCH phase:

Based upon RS-170A/CCIR R.624-3

### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

20 bits/sample

Wow and flutter:

Below measurable level

Headrooms:

20 dB (or 18 dB selectable)

Emphasis (on/off selectable in REC mode):

T1 = 50  $\mu$ s, T2 = 15  $\mu$ s

### Analog audio output performance

A/D quantization:

20 bits/sample

D/A quantization:

20 bits/sample

Frequency response:

20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at  
1 kHz)

Dynamic range:

More than 95 dB (at 1 kHz emphasis on)

Distortion:

Less than 0.05% (at 1 kHz, emphasis on,  
reference level)

Crosstalk:

Less than -80 dB (at 1 kHz, between any  
two channels)

### Cue track

Sampling frequency:

100 Hz to 12 kHz  $\pm 3$  dB

S/N ratio:

More than 45 dB (at 3% distortion level)

Distortion:

Less than 2% (T.H.D at 1 kHz reference  
level)

Wow and flutter:

Less than 0.2% rms

Erase ratio:

More than 60 dB

## HDCAM VTRs

# HDW-M2100 HDCAM Player

### Features

- Compact and affordable high-definition videocassette player
- High picture quality using HDCAM format
- Legacy playback includes Digital Betacam, MPEG IMX, Betacam SX, Betacam SP and Betacam tapes
- Built-in up and down converter
- Switchable operation: 1080/59.94i, 1080/50i, 1080/29.97PsF or 1080/25PsF
- Plays back tapes recorded in 1080/23.98PsF or 1080/24PsF modes
- 720P output capability(\*)
- Long playback time of up to 124 minutes at 1080/59.94i or 149 minutes at 1080/50i on an L-size cassette
- Versatile interfaces: HD SDI, SDI, analog component, analog composite (NTSC/PAL), digital audio (AES/EBU), analog audio, and audio monitor (2-ch, analog) outputs
- Various remote interfaces including RS-422A, RS-232C and 50-pin parallel remote interfaces
- High speed color picture search
- Dynamic Tracking playback
- Digital jog sound
- Dynamic Motion Control (DMC) playback
- 1080/1035 line conversion
- Ability to record metadata including Shot mark and UMID
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Selectable picture modes of up/down-converted output: Squeeze, letter box, and edge crop modes
- Dolby-E/Dolby AC-3 support
- Low power consumption of 220 W
- User-friendly control panel
- Easy maintenance
- "Memory Stick" system to store/recall setup files

(\*) Converted output

### Supplied Accessories

Operation manual (1)  
Installation manual (1)

### Optional Accessories

HKDW-101 Remote Control Panel  
HKDW-102 SDTI (HDCAM) Interface Board  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
RMM-131 Rack Mount Kit  
RCC-G Cables 9-pin/9-pin Cable  
HKDV-900 HD Digital Video Controller  
BVR-50 TBC Remote Controller  
BCT-HD tapes BCT-HD series HDCAM tapes  
BCT-HD12CL tapes Head Cleaning  
Videocassette Tapes for HDCAM VTRs  
MLB-1M-100 Tele-File Memory Label

\*To connect the HKDV-900 with the HDW-M2100, the optional cable, RCC-1505H/1510H/1530H is required.



# HDCAM VTRs

## Specifications

### General

96.7 mm/s (59.94 Hz), 80.6 mm/s (50 Hz)  
96.7 mm/s  
64.5 mm/s (59.94 Hz), 53.8 mm/s (50 Hz)  
59.6 mm/s  
118.6 mm/s (59.94 Hz), 101.5 mm (50 Hz)  
HDCAM: Still to  $\pm 50$  times normal speed playback  
Digital Betacam: Still to  $\pm 50$  times normal speed playback  
MPEG IMX: Still to  $\pm 78$  times normal speed playback  
Betacam SX: Still to  $\pm 78$  times normal speed playback  
Betacam SP/Betacam: Still to  $\pm 35$  times normal speed playback (59.94 Hz), Still to  $\pm 42$  times normal speed playback (50 Hz)  
Variable mode  
HDCAM: -1 to +2 times normal speed playback  
Digital Betacam: -1 to +3 times normal speed playback  
MPEG IMX: -1 to +3 times normal speed playback  
Betacam SX: -1 to +2 times normal speed playback  
Betacam SP/Betacam: -1 to +3 times normal speed playback  
Jog mode:  
Still to  $\pm 1$  times normal speed playback  
Servo lock time:  
0.6 s or less (from standby on)  
Load/unload time:  
6 s or less (both L and S cassette)  
**Inputs/outputs**  
Time code input:  
XLR 3-pin type, female (1), 0.5 to 18 Vp-p, 10 k $\Omega$ , balanced  
HD-SDI output:  
BNC (3) (SMPTE 292M including one character out), Serial Digital (1.485 Gb/s)  
SDI output:  
BNC (3) (SMPTE 259M including one character out), Serial Digital (270 Mb/s)  
Analog composite output:  
BNC (3) (RS-170A, including one character out, one WFM out)  
Y: 1.0 Vp-p, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$   
Analog component output:  
BNC (3, for 1 set), 1.0 Vp-p, 75  $\Omega$ , sync negative  
Digital audio output (CH1/2, 3/4, 5/6, 7/8):  
BNC (4), AES/EBU  
Analog audio output (CH1/2/3/4):  
XLR 3-pin type (5), male, +4 dBm (600  $\Omega$  load), low impedance, balanced  
Time code output:  
XLR 3-pin type, male (1) (2.2 Vp-p, low impedance balanced)  
Monitor output (L/R):  
XLR 3-pin type, male (2) (+4 dBm at 600  $\Omega$  load, low impedance, balanced)  
Headphones:  
JM-60 stereo phone jack ( $-\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced)  
Remote 1 input:  
D-sub 9-pin, Sony 9-pin remote interface  
Remote 1 output:  
D-sub 9-pin, Sony 9-pin remote interface  
RS-232C:  
D-sub 9-pin

Remote 2 Parallel I/O:  
D-sub 50-pin  
Video control:  
D-sub 9-pin, D-sub 15-pin  
Control panel:  
D-sub 10-pin, control panel I/O  
Other:  
Memory Stick slot  
**Processor adjustment range**  
Video level:  
 $\pm 3$  dB/ $\infty$  to +3 dB, selectable  
Chroma level:  
 $\pm 3$  dB/ $\infty$  to +3 dB, selectable  
Set up/black level:  
 $\pm 3$  IRE  
Chroma phase/hue:  
 $\pm 30^\circ$   
System sync phase:  
 $\pm 15$   $\mu$ s  
System SC phase:  
 $\pm 200$  ns  
Y/C delay:  
 $\pm 100$  ns  
**Digital video performance**  
Sampling frequency:  
Y: 74.25 MHz, R-Y/B-Y: 37.125 MHz  
Quantization:  
10 bits/sample (compression 8 bits/sample)  
Compression:  
Coefficient recording system  
Channel coding:  
S-I-NRZI PR-IV  
Error correction:  
Reed-Solomon code  
**Analog component output performance**  
Bandwidth:  
Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB  
S/N ratio:  
56 dB or more  
K-factor (2T pulse):  
1% or less  
**Analog composite output performance**  
Bandwidth:  
Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB  
S/N ratio:  
53 dB or more  
Differential gain:  
2% or less  
Differential phase:  
2% or less  
Y/C delay:  
20 ns or less  
K-factor (2T pulse):  
1% or less  
Output SCH phase:  
Based upon RS-170A/CCIR R.624-3  
**Digital audio performance**  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
20 bits/sample  
Wow and flutter:  
Below measurable level  
Headrooms:  
20 dB (or 18 dB selectable)  
Emphasis (on/off selectable in REC mode):  
T1 = 50  $\mu$ s, T2 = 15  $\mu$ s  
**Analog audio output performance**  
A/D quantization:  
20 bits/sample

D/A quantization:  
20 bits/sample  
Frequency response:  
20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at 1 kHz)  
Dynamic range:  
More than 95 dB (at 1 kHz emphasis on)  
Distortion:  
Less than 0.05% (at 1 kHz, emphasis on, reference level)  
Crosstalk:  
Less than -80 dB (at 1 kHz, between any two channels)  
**Cue track**  
Sampling frequency:  
100 Hz to 12 kHz  $\pm 3$  dB  
S/N ratio:  
More than 45 dB (at 3% distortion level)  
Distortion:  
Less than 2% (T.H.D at 1 kHz reference level)  
Wow and flutter:  
Less than 0.2% rms

## HDCAM VTRs

# HDW-M2100P HDCAM Player

### Features

- Compact and affordable high-definition videocassette player
- High picture quality using HDCAM format
- Legacy playback includes Digital Betacam, MPEG IMX, Betacam SX, Betacam SP and Betacam tapes
- Built-in up and down converter
- Switchable operation: 1080/59.94i, 1080/50i, 1080/29.97PsF or 1080/25PsF
- Plays back tapes recorded in 1080/23.98PsF or 1080/24PsF modes
- 720P output capability(\*)
- Long playback time of up to 124 minutes at 1080/59.94i or 149 minutes at 1080/50i on an L-size cassette
- Versatile interfaces: HD SDI, SDI, analog component, analog composite (NTSC/PAL), digital audio (AES/EBU), analog audio, and audio monitor (2-ch, analog) outputs
- Various remote interfaces including RS-422A, RS-232C and 50-pin parallel remote interfaces
- High speed color picture search
- Dynamic Tracking playback
- Digital jog sound
- Dynamic Motion Control (DMC) playback
- 1080/1035 line conversion
- Ability to record metadata including Shot mark and UMID
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Selectable picture modes of up/down-converted output: Squeeze, letter box, and edge crop modes
- Dolby-E/Dolby AC-3 support
- Low power consumption of 220 W
- User-friendly control panel
- Easy maintenance
- "Memory Stick" system to store/recall setup files

(\*) Converted output

### Supplied Accessories

Operation manual (1)  
Installation manual (1)

### Optional Accessories

HKDW-101 Remote Control Panel  
HKDW-102 SDTI (HDCAM) Interface Board  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
RMM-131 Rack Mount Kit  
RCC-G Cables 9-pin/9-pin Cable  
HKDV-900 HD Digital Video Controller  
BVR-50 TBC Remote Controller  
BCT-HD tapes BCT-HD series HDCAM tapes  
BCT-HD12CL tapes Head Cleaning  
Videocassette Tapes for HDCAM VTRs  
MLB-1M-100 Tele-File Memory Label

\*To connect the HKDV-900 with HDW-M2100P, the optional cable, RCC-1505H/1510H/1530H is required.



# HDCAM VTRs

## Specifications

### General

Power requirements:

100 to 240 V, 50/60 Hz

Power consumption:

220 W

Operating temperature:

+5 to +40 °C (+41 to +104 °F)

Storage temperature:

-20 to +60 °C (-4 to + 140 °F)

Humidity:

25 to 80% (relative humidity)

Mass:

23 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

HDCAM:

96.7 mm/s (59.94 Hz), 80.6 mm/s (50

Hz)

Digital Betacam:

96.7 mm/s

MPEG IMX:

64.5 mm/s (59.94 Hz), 53.8 mm/s (50

Hz)

Betacam SX:

59.6 mm/s

Betacam SP/Betacam:

118.6 mm/s (59.94 Hz), 101.5 mm (50

Hz)

HDCAM recording/playback time

(59.94i/50i/29.97PsF/25PsF):

124 minutes (59.94i/29.97PsF, with

BCT-124HDL cassette)

149 minutes (50i/25PsF, with BCT-124HDL

cassette)

40 minutes (59.94i/29.97PsF, with

BCT-40HD cassette)

48 minutes (50i/25PsF, with BCT-40HD

cassette)

HDCAM playback time (24PsF, 23.98PsF):

155 minutes (with BCT-124HDL cassette)

50 minutes (with BCT-40HD cassette)

Fast forward/rewind time:

Approx. 3 min with BCT-124HDL cassette

Search speed range

Shuttle mode

HDCAM: Still to  $\pm 50$  times normal

speed playback

Digital Betacam: Still to  $\pm 50$  times normal

speed playback

MPEG IMX: Still to  $\pm 78$  times normal

speed playback

Betacam SX: Still to  $\pm 78$  times normal

speed playback

Betacam SP/Betacam: Still to  $\pm 35$  times

normal speed playback (59.94 Hz), Still to

$\pm 42$  times normal speed playback (50 Hz)

Variable mode

HDCAM: -1 to +2 times normal speed

playback

Digital Betacam: -1 to +3 times normal

speed playback

MPEG IMX: -1 to +3 times normal speed

playback

Betacam SX: -1 to +2 times normal speed

playback

Betacam SP/Betacam: -1 to +3 times

normal speed playback

Jog mode:

Still to  $\pm 1$  times normal speed playback

Servo lock time:

0.6 s or less (from standby on)

Load/unload time:

6 s or less (both L and S cassette)

### Inputs/outputs

Time code input:

XLR 3-pin type, female (1), 0.5 to 18 Vp-p,

10 k $\Omega$ , balanced

HD-SDI output:

BNC (3) (SMPTE 292M including one

character out), Serial Digital (1.485 Gb/s)

SDI output:

BNC (3) (SMPTE 259M including one

character out), Serial Digital (270 Mb/s)

Analog composite output:

BNC (3) (RS-170A, including one character

out, one WFM out)

Y: 1.0 Vp-p, sync negative, R-Y/B-Y: 0.7

Vp-p, 75  $\Omega$

Analog component output:

BNC (3, for 1 set), 1.0 Vp-p, 75  $\Omega$ , sync

negative

Digital audio output (CH1/2, 3/4, 5/6, 7/8):

BNC (4), AES/EBU

Analog audio output (CH1/2/3/4):

XLR 3-pin type (5), male, +4 dBm (600  $\Omega$

load), low impedance, balanced

Time code output:

XLR 3-pin type, male (1) (2.2 Vp-p, low

impedance balanced)

Monitor output (L/R):

XLR 3-pin type, male (2) (+4 dBm at 600  $\Omega$

load, low impedance, balanced)

Headphones:

JM-60 stereo phone jack ( $-\infty$  to -12 dBu at

8  $\Omega$  load, unbalanced)

Remote 1 input:

D-sub 9-pin, Sony 9-pin remote interface

Remote 1 output:

D-sub 9-pin, Sony 9-pin remote interface

RS-232C:

D-sub 9-pin

Remote 2 Parallel I/O:

D-sub 50-pin

Video control:

D-sub 9-pin, D-sub 15-pin

Control panel:

D-sub 10-pin, control panel I/O

Other:

Memory Stick slot

### Processor adjustment range

Video level:

$\pm 3$  dB/ $\infty$  to +3 dB, selectable

Chroma level:

$\pm 3$  dB/ $\infty$  to +3 dB, selectable

Set up/black level:

$\pm 3$  IRE

Chroma phase/hue:

$\pm 30^\circ$

System sync phase:

$\pm 15$   $\mu$ s

System SC phase:

$\pm 200$  ns

Y/C delay:

$\pm 100$  ns

### Digital video performance

Sampling frequency:

Y: 74.25 MHz, R-Y/B-Y: 37.125 MHz

Quantization:

10 bits/sample (compression 8

bits/sample)

Compression:

Coefficient recording system

Channel coding:

S-I-NRZI PR-IV

Error correction:

Reed-Solomon code

### Analog component output performance

Bandwidth:

Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y:

0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:

56 dB or more

K-factor (2T pulse):

1% or less

### Analog composite output performance

Bandwidth:

Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y:

0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio:

53 dB or more

Differential gain:

2% or less

Differential phase:

2% or less

Y/C delay:

20 ns or less

K-factor (2T pulse):

1% or less

Output SCH phase:

Based upon RS-170A/CCIR R.624-3

### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

20 bits/sample

Wow and flutter:

Below measurable level

Headrooms:

20 dB (or 18 dB selectable)

Emphasis (on/off selectable in REC mode):

T1 = 50  $\mu$ s, T2 = 15  $\mu$ s

### Analog audio output performance

A/D quantization:

20 bits/sample

D/A quantization:

20 bits/sample

Frequency response:

20 Hz to 20 kHz, +0.5 dB/-1.0 dB (0 dB at

1 kHz)

Dynamic range:

More than 95 dB (at 1 kHz emphasis on)

Distortion:

Less than 0.05% (at 1 kHz, emphasis on,

reference level)

Crosstalk:

Less than -80 dB (at 1 kHz, between any

two channels)

### Cue track

Sampling frequency:

100 Hz to 12 kHz  $\pm 3$  dB

S/N ratio:

More than 45 dB (at 3% distortion level)

Distortion:

Less than 2% (T.H.D at 1 kHz reference

level)

Wow and flutter:

Less than 0.2% rms

## HDCAM VTRs

# HDW-S280 HDCAM Compact Recorder

### Features

- High-definition pictures using the HDCAM format
- Interlace/progressive switchable recording and playback of multiple frame rates including 1080/59.94i, 1080/50i, 1080/29.97PsF, 1080/25PsF, 1080/24PsF(\*1) and 1080/23.98PsF(\*1)
- Powerful legacy playback capability: Betacam SX, Betacam SP and Betacam formats
- Up-and down-conversion(\*2) capabilities with selectable picture modes (squeeze, letter box, edge crop)
- Highly compact and portable design
- User-friendly control panel design
- Equipped with a 3.5-inch(\*3) type color 16:9 LCD screen on the control panel
- AC/DC or battery-powered operation(\*4)
- Recording of up to 40 minutes using an S-sized cassette(\*5)
- Frame-accurate back-space editing capability for sequential recording with no picture interference at transition points
- Sequential recording function using two HDW-S280 VTRs to record for more than 40 minutes
- Assemble and two-machine editing capability(\*6)
- High-speed color picture search
- Versatile interfaces: HD-SDI I/O, SD-SDI output, analog composite output, analog audio I/O, analog audio monitor output, reference input, time code I/O, and RS-422 9-pin remote interface
- Easy setup using "Memory Stick" media
- Metadata recording:UMID and Shot Marks

(\*1) The HDW-S280 does not offer the 3-2 pull-down capability. Therefore, 1080/24PsF and 1080/23.98PsF playback cannot be converted to 1080/59.94i and 1080/50i output. (\*2) 1080/24PsF and 1080/23.98PsF playback cannot be converted to 480/59.94i and 576/50i output. (\*3) Viewable area measured diagonally. (\*4) To use with a battery, the optional BKP-L551 battery adaptor is required. (\*5) The HDW-S280 recorder accepts S-cassette only. (\*6) Frame accuracy is  $\pm 1$  frame.

### Supplied Accessories

Operation manual (1)  
Installation manual (1)  
Connector cap (1)

### Optional Accessories

BCT-HD tapes BCT-HD series HDCAM tapes  
BCT-HD12CL tapes Head Cleaning  
Videocassette Tapes for HDCAM VTRs  
RCC-G Cables 9-pin/9-pin Cable  
HKDV-900 HD Digital Video Controller  
RM-280 Editing Controller  
BKP-L551 Li-ion Battery Adaptor  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BC-M150 Ni-MH & Li-ion Battery Charger  
BC-L70 Li-ion Battery Charger



# HDCAM VTRs

## Specifications

### General

Power requirements  
100 to 240 V, 50/60 Hz

Power consumption  
80 W (AC operation), 60 W (DC operation)

Operating temperature  
+5 to +40°C (41 to 104°F)

Storage temperature  
-20 to +60°C (-4 to +140°F)

Humidity  
25 to 80%

Mass  
6 kg (13 lb 4 oz)

Dimensions (W x H x D)  
210 x 132 x 425 mm (8 3/8 x 5 1/4 x 16 3/4 inches)

Tape speed  
HDCAM  
96.7 mm/s (59.94i, 29.97PsF), 80.6 mm/s (50i, 25PsF), 77.4 mm/s (24PsF, 23.98PsF)

BETACAM SX  
59.6 mm/s

BETACAM/BETACAM SP  
118.6 mm/s (59.94i), 101.5 mm (50i)

HDCAM Record/playback time  
40 minutes (59.94i, 29.97PsF, with BCT-40HD cassette)  
48 minutes (50i, 25PsF, with BCT-40HD cassette)  
50 minutes (24PsF, 23.98PsF, with BCT-40HD cassette)

Fast forward/rewind time  
Approx. 4 minutes (fast-forward), 3 minutes (rewind)

Search speed range  
Shuttle mode  
Still to  $\pm 10$  times normal speed playback

Jog mode  
Still to  $\pm 1$  time normal speed playback

Servo lock time  
1.0 s or less

Load/unload time  
7 s or less

**Input/output**

HD-SDI input  
BNC x 1 (SMPTE 292M), Serial Digital (1.485 Gb/s)

Reference video input  
BNC x 2 (with a loop-through), Tri-level sync, 0.6 Vp-p, 75  $\Omega$ , sync negative or Black Burst or Composite, 0.3 Vp-p, 75  $\Omega$ , sync negative

Analog audio input (CH 1/2)  
XLR-3-pin type, female x 2, +4/0/-3/-20/-60 dBu selectable, high impedance, balanced

Timecode input  
BNC x1 (0.5 to 18 Vp-p, 10 k $\Omega$ , balanced)

HD-SDI output  
BNC x 2 (SMPTE 292M), Serial Digital (1.485 Gb/s)

SD-SDI output  
BNC x 2 (SMPTE 259M including one character out), Serial Digital (270 Mb/s)

Analog composite output  
BNC x 2 (RS-170A, including one character out)Y: 1.0 Vp-p, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$

Analog audio output (CH 1/2)  
XLR-3-pin type, male x 2, +4 dBm (600  $\Omega$  load), low impedance, balanced

Timecode output  
BNC x1 (1.0 Vp-p, unbalanced)

Audio monitor output L/R  
XLR-3-pin type, male x 2, +4 dBm (600  $\Omega$  load), low impedance, balanced

Headphones  
JM-60 Stereo phone jack (- $\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced)

Remote (RS-422)  
D-sub 9-pin, Sony 9-pin remote interface

Video control  
D-sub 9-pin

DC output  
Round shape 4-pin, female x 1, for RM-280 or BVR-3 controller

Others  
"Memory Stick" slot

**Processor adjustment range**

Video level  
 $\pm 3$  dB/ $\infty$  to +3 dB, selectable

Chroma level  
 $\pm 3$  dB/ $\infty$  to +3 dB, selectable

Set up/black level  
 $\pm 210$  mV

Chroma phase/hue  
 $\pm 30^\circ$

System sync phase  
 $\pm 15$   $\mu$ s

System SC phase  
 $\pm 200$  ns

Y/C delay  
 $\pm 100$  ns

**Analog composite output**  
performance—

Bandwidth  
Y: 0 to 5.75 MHz +0.5 dB/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5 dB/-2.0 dB

S/N ratio  
53 dB or more

Differential gain  
2% or less

Differential phase  
2% or less

Y/C delay  
20 ns or less

K Factor (2T Pulse)  
1% or less

Output SCH phase  
Based upon RS-170A/CCIR R.624-3

**Digital audio performance**

Sampling frequency  
48 kHz (Synchronized with video)

Quantization  
20 bit/sample

Wow & flutter  
Below measurable level

Headrooms  
20/18/16/12 dB selectable

Emphasis (ON/OFF selectable in REC mode)  
T1=50  $\mu$ s, T2=15  $\mu$ s (on/off selectable in recording mode)

**Analog audio output**  
performance—

A/D quantization  
20 bit/sample

D/A quantization  
20 bit/sample

Frequency response  
20 Hz to 20 kHz +0.5 dB/-1.0 dB (0 dB at 1 kHz)

Dynamic range  
More than 90 dB (at 1 kHz, emphasis ON)

Distortion  
Less than 0.08% (at 1 kHz, emphasis ON, reference level)

Crosstalk  
Less than -80 dB (at 1 kHz, between any two channels)

**Cue track**

Frequency response  
100 Hz to 10 kHz  $\pm 3$  dB

S/N ratio  
More than 45 dB (at 3% distortion level)

Distortion  
Less than 2% (T.H.D. at 1 kHz, reference level)

Wow & flutter  
Less than 0.2%

Erase ratio  
More than 60 dB

HDCAM VTRs



HDCAM VTRs

XDCAM Decks

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PDW-V1 ..... 314  
PDW-D1 ..... 315  
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## XDCAM Decks

# PDW-1500 XDCAM Compact Deck (Recording and Playback)

### Features

- MPEG IMX/DVCAM recording and playback ●Two optical heads allows transfer speeds of 2.5x for MPEG IMX (at 50 Mb/s) and 5x for DVCAM streams ●Proxy AV (low-resolution audio and video) Data recording
- High-speed transfer of Proxy AV Data at 50-times speed
- Ability to write EDL data (Clip List) back onto disc
- Metadata recording ●Long recording/playback time; MPEG IMX at 30 Mb/s: 68 min., 40 Mb/s: 55 min., 50 Mb/s: 45 min., DVCAM: 85 min.\*A variety of interfaces including SDI I/O, analog composite I/O, digital audio I/O, analog audio I/O, time code I/O, headphone output, audio monitor output, Gigabit Ethernet, i.LINK (DV IN/OUT or file access mode(\*1)) ●Thumbnail Search operation
- Scene Selection operation ●Search speed (in color) - JOG:  $\pm 1$  time normal speed, Variable:  $\pm 1$  time normal speed, Shuttle:  $\pm 35$  times normal speed ●Insert editing of audio tracks of a single clip (clip audio insert editing function) ●i.LINK (DV stream) output from MPEG IMX playback

(\*1) For connection with third party products using this mode, please contact your nearest Sony office.

### Supplied Accessories

Operation manual (1)  
Quick manual (1)  
PDZ-1 proxy browsing software (1)  
MXF proxy viewer (1)

### Optional Accessories

PFD23 Disc Professional Disc  
RCC-G Cables 9-pin/9-pin Cable  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)



# XDCAM Decks

## Specifications

### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

75 W

Operating temperature:

+5 to +40°C (+41 to +104°F)

Storage temperature:

-20 to +60°C (-4 to +140°F)

Operating humidity:

20 to 90% (relative humidity)

Mass:

7.4 kg (16 lb 5 oz)

Dimensions (W x H x D):

210 x 130 x 415 mm

(8 3/8 x 5 1/8 x 16 3/8 inches)

Recording format

Video:

MPEG IMX (50/40/30 Mb/s), DVCAM (25 Mb/s)

Proxy Video:

MPEG-4

Audio:

MPEG IMX: 8 ch/16 bit/48 kHz or 4 ch/24 bit/48 kHz  
DVCAM: 4 ch/16 bit/48 kHz

Proxy Audio:

A-law (8/4 ch, 8 bit, 8 kHz)

Playback format

Video:

MPEG IMX (50/40/30 Mb/s), DVCAM (25 Mb/s)

Proxy Video:

MPEG-4

Audio:

MPEG IMX: 8 ch/16 bit/48 kHz or 4 ch/24 bit/48 kHz  
DVCAM: 4 ch/16 bit/48 kHz

Proxy Audio

A-law (8/4 ch, 8 bit, 8 kHz)

Recording/playback time

MPEG IMX:

50 Mb/s: 45 min., 40 Mb/s: 55 min., 30 Mb/s: 68 min.

DVCAM:

85 min.

Search speed (in color)

Jog mode:

±1 time normal playback speed

Variable mode:

±1 time normal playback speed

Shuttle mode:

±35 times normal playback speed

### Signal inputs

Analog reference input:

BNC x2 (including loop through), 1.0 Vp-p, 75 Ω, sync negative

Analog composite input:

BNC x2 (including loop through), 1.0 Vp-p, 75 Ω, sync negative

SDI input:

BNC x1, SMPTE 259M, (ITU-R BT656-3), 270 Mb/s

Analog audio input:

XLR x2 (channel selectable), +4/0/-3/-6 dBu, 10 kΩ, balanced

Digital audio input:

AES/EBU, BNC x2, 4 channels

Time code input:

BNC x1

### Signal outputs

Analog composite video output:

BNC x2 (including one character out), 1.0 Vp-p, 75 Ω, sync negative

SDI output:

BNC x2 (including one character out), SMPTE 259M (ITU-R BT656-3), 270 Mb/s

Analog audio output:

XLR x2 (ch. selectable), +4/0/-3/-6 dBu (selectable from menu), 600 Ω load, low impedance, balanced

Audio monitor output:

RCA x1 (L, R, Mix), -11 dBu, 47 kΩ, unbalanced

Digital audio output:

BNC x2, 4 channels

Headphone output:

JM-60 stereo phone jack x1, -∞ to -13 dBu, 8 Ω, unbalanced

Time code output:

BNC x1

### Other inputs and outputs

i.LINK:

IEEE 1394, DV IN/OUT or file access mode, 6-pin x 1

Ethernet:

1000Base-T (RJ-45 x1)

RS-422A:

D-sub 9-pin x1 (VTR protocol)

### Video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

10 bits/sample

Error correction:

Reed Solomon Code

Analog composite input to analog composite output

Bandwidth:

30 Hz to 4.5 MHz +0.5/-1.5 dB (NTSC)  
25 Hz to 5.5 MHz +0.5/-1.5 dB (PAL)

S/N ratio:

53 dB or more

Differential gain:

2% or less

Differential phase:

2° or less

Y/C delay:

20 ns or less

K-factor (2T pulse):

2% or less

### Processor adjustment range

Video level:

±3 dB

Chroma level:

±3 dB

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±3 μs

System SC phase:

±200 ns

### Audio performance

Frequency response:

20 Hz to 20 kHz +0.5/-1.0 dB (0 dB at 1 kHz)

Dynamic range:

More than 90 dB

Distortion:

Less than 0.05% (at 1 kHz)

Head room:

20/18/16/12 dB (selectable from menu)

### Others

\*Eco Info\*

Mass has been reduced by 50% compared with the DSR-2000 (previous model.)

Halogenated flame retardants are not used in cabinets and in printed wiring boards.

## XDCAM Decks

# PDW-V1 XDCAM Mobile Deck (Playback and File Recording)

### Features

- Playback of MPEG IMX/DVCAM recordings
- High-resolution AV files (MPEG IMX/DVCAM) and Proxy AV (low-resolution audio and video) files can be recorded via its Ethernet interface or i.LINK (file access mode(\*1)) interface (\*2) ● High-speed transfer of proxy AV data at 30-times speed ● Long playback time; MPEG IMX at 30 Mb/s: 68 min., 40 Mb/s: 55 min., 50 Mb/s: 45 min., DVCAM: 85 min. ● Metadata recording ● Ability to write EDL data (Clip List) back onto disc ● Compact, lightweight design ● Allows transfer speeds of 1.25x for MPEG IMX (at 50 Mb/s) and 2.5x for DVCAM streams (equipped with one optical head) ● 3.5-inch(\*3) type color LCD screen for monitoring pictures and black-and-white LCD screen for displaying information such as time codes, audio meters and disc capacity ● Thumbnail Search operation ● Scene Selection operation ● Analog RGB output capability for direct connection to computer displays ● AC/battery-powered operation ● Built-in audio speaker ● Network connectivity (100Base-TX) ● Search speed (in color) - JOG:  $\pm 1$  time normal speed, Variable:  $\pm 1$  time normal speed, Shuttle:  $\pm 20$  times normal speed ● i.LINK (DV stream) output from MPEG IMX playback

(\*1) For connection with third party products using this mode, please contact your nearest Sony office. (\*2) The PDW-V1 does not support synchronous video/audio input. (\*3) Viewable area measured diagonally



### Supplied Accessories

- Operation manual (1)
- PDZ-1 proxy browsing software (1)
- MXF proxy viewer (1)
- Shoulder belt (1)

### Optional Accessories

- PFD23 Disc Professional Disc
- BP-IL75 Rechargeable Lithium-ion Battery Pack
- BP-M100 Rechargeable Nickel Metal Hydride Battery Pack
- BP-GL95 Rechargeable Lithium-ion Battery Pack
- BP-GL65 Rechargeable Lithium-ion Battery Pack
- BP-L60S Rechargeable Lithium-ion Battery Pack
- BC-M50 Ni-MH & Li-ion Battery Charger
- BC-M150 Ni-MH & Li-ion Battery Charger
- BC-L70 Li-ion Battery Charger
- VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)
- VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)

### Specifications

#### General

- Power requirements:
  - AC 100 to 240 V, 50/60 Hz, DC (with battery)
- Power consumption:
  - 45 W
- Operating temperature:
  - 0 to +40°C (+32 to +104°F)
- Storage temperature:
  - 20 to +60°C (-4 to +140°F)
- Humidity:
  - 20 to 90% (relative humidity)

#### Mass:

3.5 kg (7 lb 11 oz)

#### Dimensions (W x H x D):

210 x 90 x 320 mm  
(8 3/8 x 3 5/8 x 12 5/8 inches)

#### Recording format

- Proxy Video:
  - MPEG-4
- Proxy Audio
  - A-law (8/4 ch, 8 bit, 8 kHz)

#### Playback format

- Video:
  - MPEG IMX (50/40/30 Mb/s), DVCAM (25 Mb/s)
- Proxy Video:
  - MPEG-4
- Audio:
  - MPEG IMX: 8 ch/16 bit/48 kHz or 4 ch/24 bit/48 kHz
  - DVCAM: 4 ch/16 bit/48 kHz

- Proxy Audio:
  - A-law (8/4ch, 8 bit, 8 kHz)

#### Playback time

- MPEG IMX:
  - 50 Mb/s: 45 min., 40 Mb/s: 55 min., 30 Mb/s: 68 min.

#### DVCAM:

85 min.

#### Search speed (in color)

- Jog mode:
  - $\pm 1$  times normal playback speed
- Variable mode:
  - $\pm 1$  times normal playback speed
- Shuttle mode:
  - $\pm 20$  times normal playback speed

### Signal outputs

#### Analog composite video:

- BNC x1 (character out), 1.0 Vp-p, 75  $\Omega$ , sync negative

#### SDI output:

- BNC x1 (character out), SMPTE 259M (ITU-R BT656-3), 270 Mb/s

#### Analog RGB output:

- D-sub 15-pin x1

#### Audio monitor output:

- RCA x2 (L/R), -11 dBu, 47 k $\Omega$ , unbalanced

#### Headphone output:

- JM-60 Stereo phone jack x1, -13 dBu, 8  $\Omega$ , unbalanced

#### Built-in audio speaker:

- x1, monaural

### Other inputs/outputs

#### i.LINK:

- IEEE 1394, DV OUT(\*) or file access mode, 6-pin x 1

#### Ethernet:

- 100Base-TX (RJ-45 x1)

### Video performance

#### Sampling frequency:

- Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

#### Quantization:

- 10 bits/sample

#### Error correction:

- Reed Solomon Code

### Others

#### "Eco Info"

- Halogenated flame retardants are not used in printed wiring boards.

(\*) The PDW-V1 does not support synchronous DVCAM recording through i.LINK interface.

## XDCAM Decks

# PDW-D1 XDCAM Drive Unit

### Features

- Equipped with i.LINK interface that supports both DV IN/OUT and file access mode(\*1)
- Recording of high-resolution AV files (MPEG IMX/DVCAM) via i.LINK (file access mode) interface
- Synchronous DVCAM recording and playback via i.LINK (DV IN/OUT) interface
- Proxy AV (low-resolution audio and video) recording
- High-speed transfer: 30x for Proxy, 2.5x for DVCAM, and 1.25x for MPEG IMX (at 50 Mb/s) via i.LINK (file access mode) interface
- i.LINK (DV stream) output from MPEG IMX playback
- Metadata recording
- Ability to write EDL data (Clip List) back onto disc
- Highly compact, lightweight design
- AC/battery-powered operation(\*2)
- Equipped with one optical head

(Note) To setup the PDW-D1, a Windows-based PC running the supplied setup utility software is required (not compatible with Macintosh OS). (\*1) For connection with third party products using this mode, please contact your nearest Sony office. (\*2) To use with a battery, the optional BKP-L551 adaptor is required.



### Supplied Accessories

- Operation manual (1)
- PDZ-1 proxy browsing software (1)
- MXF proxy viewer (1)
- Setup utility software (1)

### Optional Accessories

- PFD23 Disc Professional Disc
- BKP-L551 Li-ion Battery Adaptor
- BP-GL95 Rechargeable Lithium-ion Battery Pack
- BP-GL65 Rechargeable Lithium-ion Battery Pack
- BP-L60S Rechargeable Lithium-ion Battery Pack
- BC-M50 Ni-MH & Li-ion Battery Charger
- BC-M150 Ni-MH & Li-ion Battery Charger
- BC-L70 Li-ion Battery Charger
- VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)
- VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)

### Specifications

#### Power requirements:

- AC 100 to 240 V, 50/60 Hz, DC (with battery)

#### Power consumption:

- 22 W

#### Operating temperature:

- 0 to +40°C (+32 to +104°F)

#### Storage temperature:

- 20 to +60°C (-4 to +140°F)

#### Humidity:

- 20 to 90% (relative humidity)

#### Mass:

- 3.0 kg (6 lb 9 oz)

#### Dimensions (W x H x D):

- 78 x 182 x 257 mm
- (3 1/8 x 7 1/4 x 10 1/8 inches)

#### Recording/playback format

##### Video:

- MPEG IMX (50/40/30 Mb/s), DVCAM (25 Mb/s)

#### Proxy Video:

- MPEG-4

#### Audio:

- MPEG IMX (8ch/16 bit/48 kHz or 4ch/24 bit/48 kHz), DVCAM (4ch/16 bit/48 kHz)

#### Proxy Audio

- A-law (8/4 ch, 8 bit, 8 kHz)

#### Recording/playback time

##### MPEG IMX:

- 50 Mb/s: 45 min., 40 Mb/s: 55 min., 30 Mb/s: 68 min.

##### DVCAM:

- 85 min.

#### i.LINK:

- IEEE 1394, DV IN/OUT or file access mode, 6-pin x 1



XDCAM Decks

## XDCAM Decks

### PDJ-C1080 XDCAM Cart

#### Features

- Can accommodate up to four units of PDW-1500 decks and 80 pieces of Professional Disc media
- Total capacity using 80 discs are 4.6 Terabytes
- Ideal for playout operations, recording of incoming feeds and archiving
- High reliability and low maintenance cost

#### Specifications

##### General

Power requirements:

AC 100 to 240V, 50/60Hz

Power consumption:

250 W (without PDW-1500 decks)

550 W (with four PDW-1500 decks installed)

Operating temperature:

5°C to 35°C (41°F to 95°F)

Storage temperature:

-20°C to 60°C (-4°F to 140°F)

Operating humidity:

25% to 80%

Storage humidity:

Less than 90%

Mass:

120 kg (264 lb 9 oz)

(without PDW-1500 decks, discs)

157 kg (346 lb 2 oz)

(with four PDW-1500 decks and 80 discs)

Dimensions:

450(W) x 1830 (H) x 900(D)mm

(17 3/4 x 72 1/8 x 35 1/2 inches)



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## Digital Betacam VTRs

### DVW-M2000 Digital Betacam Recorder

#### Features

- Superb picture quality and high sound quality of Digital Betacam format
- Powerful legacy playback capability of MPEG IMX, Betacam SX, Betacam SP and Betacam as well as Digital Betacam format
- HD upconversion output capability (1080/59.94i, 720/59.94p)(option: \*1)
- Compact 4U height design and light weight
- High-quality four-channel 20-bit digital audio
- Long recording time of 124 minutes on an L-cassette and 40 minutes on an S-cassette
- Versatile interfaces including SDI I/O, analog component I/O, digital and analog audio I/O, time code I/O, analog composite I/O and 50-pin parallel remote interface as standard
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Digital audio jog sound
- High-speed picture search
- Variable speed playback
- Dynamic Motion Control (DMC) functionality
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer to read and write information onto and from a cassette with an optional Tele-File label attached
- Remote maintenance and monitoring over an Ethernet network using the optional BZNW-1000 ISR Proxy software
- Optional remote control panel BKDW-101
- Built-in signal generator
- Can be installed in LMS and Flexicart systems



(\*1) Requires the optional BKMW-104 board.

#### Supplied Accessories

PSW 4x16 rack mount screws (4)  
 Operation manual (1)  
 Installation manual (1)

#### Optional Accessories

BKDW-101 Remote Control Panel  
 BKMW-102 Remote Control Unit  
 BKMW-103 Control Panel Extension Kit  
 BKMW-104 HD Up-converter Board  
 RCC-G Cables 9-pin/9-pin Cable  
 RMM-131 Rack Mount Kit  
 BVR-50 TBC Remote Controller  
 MLB-1M-100 Tele-File Memory Label  
 MSH "Memory Stick" IC Memory Media  
 BCT-D tapes BCT-D Series Digital BETACAM Tapes

# Digital Betacam VTRs

## Specifications

### General

Power requirements:  
AC 100 V to 240 V, 50/60 Hz

Power consumption:  
220 W

Operating temperature:  
+5°C to +40°C (+41°F to +104°F)

Storage temperature:  
-20°C to +60°C (-4°F to +140°F)

Humidity:  
20% to 90% (relative humidity)

Mass:  
23.5 kg (52 lb 11 oz)

Dimensions (W x H x D):  
427 x 174 x 544 mm (16 7/8x 6 7/8x 21 1/2 inches)

Tape speed

Digital BETACAM:  
96.7 mm/s

MPEG IMX:  
64.467 mm/s

BETACAM SX:  
59.515 mm/s

BETACAM/BETACAM SP:  
118.6 mm/s

Recording/playback time (Digital Betacam):  
Max. 124 min with BCT-D124L cassette

Fast forward/rewind time:  
Approx. 3 min with BCT-D124L cassette

Search speed range

Digital BETACAM:  
±50 times normal playback speed

MPEG IMX:  
±78 times normal playback speed

BETACAM SX:  
±78 times normal playback speed

BETACAM/BETACAM SP:  
±35 times normal playback speed

Servo lock time:  
0.5 s or less (from standby on)

Load/unload time:  
6 s or less

**Input/output signals**

Analog composite input:  
BNC (x2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:  
BNC (x3, including one character out), 1.0 Vp-p, 75 Ω, sync negative

Analog component input:  
BNC (x3, for 1 set, Y/R-Y/B-Y).Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

Analog component output:  
BNC (x3, for 1 set, Y/R-Y/B-Y).Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

SDI input:  
BNC (x2, including one active through out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDI output:  
BNC (x3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

HD-SDI output (option):  
BNC (x3)

Analog audio input:  
XLR (x4) (4CH: channel selectable)

Analog audio output:  
XLR (x4) (4CH: channel selectable)

Cue audio input:  
XLR (x1, only Digital Betacam recording)

Cue audio output:  
XLR (x1, only Digital Betacam playback)

Digital audio input:  
BNC (x2), 4 channels, AES/EBU, default 48 kHz (32 to 48 kHz with sample rate converter), complies with AES-3id-1995

Digital audio output:  
BNC (x4), 8 channels, AES/EBU, 48 kHz fixed, complies with AES-3id-1995

Remote control

Remote (RS-422A):  
D-sub 9-pin (x2), Sony 9-pin remote interface

RS-232C (ISR\*):  
D-sub 9-pin (x1), RS-232C interface

Parallel remote:  
D-sub 50-pin (x1)

Video control:  
D-sub 15-pin (x1, for connection with BVR-50 Video Controller)

D-sub 9-pin (x1, for connection with HKDV-503/900 Video Controller)

Control panel:  
Circular connector 10-pin

Time code input:  
XLR (x1)

Time code output:  
XLR (x1)

Memory card insertion slot:  
Memory Stick slot (x1)

Monitor output L/R:  
XLR (x2) (channel selectable)

Phones:  
JM-60 Stereo phone jack

### Processor adjustment range

Video level:  
±3 dB/ -∞ to 3 dB selectable

Chroma level:  
±3 dB/ -∞ to 3 dB selectable

Set up/black level:  
±30 IRE/±210 mV

Chroma phase/hue:  
±30°

System sync phase:  
±15 μs

System SC phase:  
±200 ns

Y/C delay:  
±100 ns (BETACAM/BETACAM SP playback only)

Composite input level:  
±3 dB

### Digital video performance

Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:  
10 bits/sample

Error correction:  
Reed-Solomon code

Digital input to analog component output:  
D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 62 dB or more, K-factor (2T pulse): 1% or less

Analog component input to analog component output:  
A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more, K-factor (2T pulse): 1% or less, LF non-linearity:3% or less

Analog composite input to analog composite output:  
A/D and D/A quantization: 10 bits/sample, Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more, Differential gain: 2% or less, Differential phase: 2° or less

Y/C delay: 20 ns or less, K-factor (2T pulse): 1% or less

**Digital audio performance**

Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
20 bits/sample

Analog input to analog output:  
Frequency response (0 dB at 1kHz): 20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):  
More than 95 dB

Distortion (at 1 kHz, emphasis ON, reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two channels): Less than -80 dB, Wow & flutter: Below measurable level

Head room:  
20 dB (18 dB selectable)

Emphasis (ON/OFF selectable in REC mode):  
T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## Digital Betacam VTRs

### DVW-M2000P Digital Betacam Recorder

#### Features

- Superb picture quality and high sound quality of Digital Betacam format
- Powerful legacy playback capability of MPEG IMX, Betacam SX, Betacam SP and Betacam as well as Digital Betacam format
- HD upconversion output capability (1080/50i)(option: \*1)
- Compact 4U height design and light weight
- High-quality four-channel 20-bit digital audio
- Long recording time of 124 minutes on an L-cassette and 40 minutes on an S-cassette
- Versatile interfaces including SDI I/O, analog component I/O, digital and analog audio I/O, time code I/O, analog composite I/O and 50-pin parallel remote interface as standard
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Digital audio jog sound
- High-speed picture search
- Variable speed playback
- Dynamic Motion Control (DMC) functionality
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer to read and write information onto and from a cassette with an optional Tele-File label attached
- Remote maintenance and monitoring over an Ethernet network using the optional BZNW-1000 ISR Proxy software
- Optional remote control panel BKDW-101
- Built-in signal generator
- Can be installed in LMS and Flexicart systems

(\*1) Requires the optional BKMW-104 board.

#### Supplied Accessories

PSW 4x16 rack mount screws (4)  
 Operation manual (1)  
 Installation manual (1)

#### Optional Accessories

BKDW-101 Remote Control Panel  
 BKMW-102 Remote Control Unit  
 BKMW-103 Control Panel Extension Kit  
 BKMW-104 HD Up-converter Board  
 RCC-G Cables 9-pin/9-pin Cable  
 RMM-131 Rack Mount Kit  
 BVR-50P TBC Remote Controller  
 MLB-1M-100 Tele-File Memory Label  
 MSH "Memory Stick" IC Memory Media  
 BCT-D tapes BCT-D Series Digital BETACAM Tapes



# Digital Betacam VTRs

## Specifications

### General

Power requirements:  
AC 100 V to 240 V, 50/60 Hz

Power consumption:  
220 W

Operating temperature:  
+5°C to +40°C (+41°F to +104°F)

Storage temperature:  
-20°C to +60°C (-4°F to +140°F)

Humidity:  
20% to 90% (relative humidity)

Mass:  
23.5 kg (52 lb 11 oz)

Dimensions (W x H x D):  
427 x 174 x 544 mm (16 7/8x 6 7/8x 21 1/2 inches)

Tape speed

Digital BETACAM:  
96.7 mm/s

MPEG IMX:  
53.776 mm/s

BETACAM SX:  
59.575 mm/s

BETACAM/BETACAM SP:  
101.51 mm/s

Recording/playback time (Digital Betacam):  
Max. 124 min with BCT-D124L cassette

Fast forward/rewind time:  
Approx. 3 min with BCT-D124L cassette

Search speed range

Digital BETACAM:  
±50 times normal playback speed

MPEG IMX:  
±78 times normal playback speed

BETACAM SX:  
±78 times normal playback speed

BETACAM/BETACAM SP:  
±42 times normal playback speed

Servo lock time:  
0.7 s or less (from standby on)

Load/unload time:  
6 s or less

**Input/output signals**

Analog composite input:  
BNC (x2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:  
BNC (x3, including one character out), 1.0 Vp-p, 75 Ω, sync negative

Analog component input:  
BNC (x3, for 1 set, Y/R-Y/B-Y).Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

Analog component output:  
BNC (x3, for 1 set, Y/R-Y/B-Y).Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

SDI input:  
BNC (x2, including one active through out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDI output:  
BNC (x3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

HD-SDI output (option):  
BNC (x3)

Analog audio input:  
XLR (x4) (4CH: channel selectable)

Analog audio output:  
XLR (x4) (4CH: channel selectable)

Cue audio input:  
XLR (x1, only Digital Betacam recording)

Cue audio output:  
XLR (x1, only Digital Betacam playback)

Digital audio input:  
BNC (x2), 4 channels, AES/EBU, default 48 kHz (32 to 48 kHz with sample rate converter), complies with AES-3id-1995

Digital audio output:  
BNC (x4), 8 channels, AES/EBU, 48 kHz fixed, complies with AES-3id-1995

Remote control

Remote (RS-422A):  
D-sub 9-pin (x2), Sony 9-pin remote interface

RS-232C (ISR\*):  
D-sub 9-pin (x1), RS-232C interface

Parallel remote:  
D-sub 50-pin (x1)

Video control:  
D-sub 15-pin (x1, for connection with BVR-50P Video Controller)  
D-sub 9-pin (x1, for connection with HKDV-503/900 Video Controller)

Control panel:  
Circular connector 10-pin

Time code input:  
XLR (x1)

Time code output:  
XLR (x1)

Memory card insertion slot:  
Memory Stick slot (x1)

Monitor output L/R:  
XLR (x2) (channel selectable)

Phones:  
JM-60 Stereo phone jack

### Processor adjustment range

Video level:  
±3 dB/ -∞ to 3 dB selectable

Chroma level:  
±3 dB/ -∞ to 3 dB selectable

Set up/black level:  
±30 IRE/±210 mV

Chroma phase/hue:  
±30°

System sync phase:  
±15 μs

System SC phase:  
±200 ns

Y/C delay:  
±100 ns (BETACAM/BETACAM SP playback only)

Composite input level:  
±3 dB

### Digital video performance

Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:  
10 bits/sample

Error correction:  
Reed-Solomon code

Digital input to analog component output:  
D/A quantization: 10 bits/sample  
Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB  
S/N ratio: 62 dB or more, K-factor (2T pulse): 1% or less

Analog component input to analog component output:  
A/D and D/A quantization: 10 bits/sample  
Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB  
S/N ratio: 56 dB or more, K-factor (2T pulse): 1% or less, LF non-linearity:3% or less

Analog composite input to analog composite output:  
A/D and D/A quantization: 10 bits/sample,  
Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB  
S/N ratio: 56 dB or more, Differential gain: 2% or less, Differential phase: 2° or less  
Y/C delay: 20 ns or less, K-factor (2T pulse): 1% or less

**Digital audio performance**

Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
20 bits/sample

Analog input to analog output:  
Frequency response (0 dB at 1kHz): 20 Hz to 20 kHz +0.5/-1.0 dB  
Dynamic range (at 1 kHz, emphasis ON): More than 95 dB  
Distortion (at 1 kHz, emphasis ON, reference level): Less than 0.05%  
Cross talk (at 1 kHz, between any two channels): Less than -80 dB, Wow & flutter: Below measurable level

Head room:  
20 dB (18 dB selectable)

Emphasis (ON/OFF selectable in REC mode):  
T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## Digital Betacam VTRs

### DVW-2000 Digital Betacam Recorder

#### Features

- Superb picture quality and high sound quality of Digital Betacam format
- HD upconversion output capability (1080/59.94i, 720/59.94p)(option: \*1)
- Compact 4U height design and light weight
- High-quality four-channel 20-bit digital audio
- Long recording time of 124 minutes on an L-cassette and 40 minutes on an S-cassette
- Versatile interfaces including SDI I/O, analog component I/O, digital and analog audio I/O, time code I/O, analog composite I/O and 50-pin parallel remote interface as standard
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Digital audio jog sound
- High-speed picture search
- Variable speed playback
- Dynamic Motion Control (DMC) functionality
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer to read and write information onto and from a cassette with an optional Tele-File label attached
- Remote maintenance and monitoring over an Ethernet network using the optional BZNW-1000 ISR Proxy software
- Optional remote control panel BKDW-101
- Built-in signal generator
- Can be installed in LMS and Flexicart systems

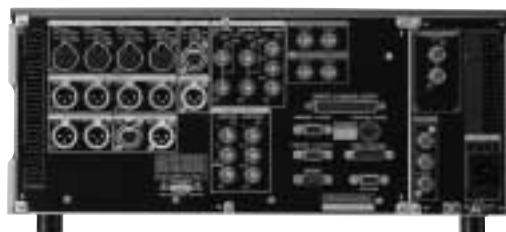
(\*1) Requires the optional BKMW-104 board.

#### Supplied Accessories

PSW 4x16 rack mount screws (4)  
 Operation manual (1)  
 Installation manual (1)

#### Optional Accessories

BKDW-101 Remote Control Panel  
 BKMW-102 Remote Control Unit  
 BKMW-103 Control Panel Extension Kit  
 BKMW-104 HD Up-converter Board  
 RCC-G Cables 9-pin/9-pin Cable  
 RMM-131 Rack Mount Kit  
 BVR-50 TBC Remote Controller  
 MLB-1M-100 Tele-File Memory Label  
 MSH "Memory Stick" IC Memory Media  
 BCT-D tapes BCT-D Series Digital BETACAM Tapes



# Digital Betacam VTRs

## Specifications

### General

#### Power requirements:

AC 100 V to 240 V, 50/60 Hz

#### Power consumption:

200 W

#### Operating temperature:

+5°C to +40°C (+41°F to +104°F)

#### Storage temperature:

-20°C to +60°C (-4°F to +140°F)

#### Humidity:

20% to 90% (relative humidity)

#### Mass:

23.5 kg (52 lb 11 oz)

#### Dimensions (W x H x D):

427 x 174 x 544 mm (16 7/8x 6 7/8x 21 1/2 inches)

#### Tape speed

96.7 mm/s

#### Recording/playback time (Digital Betacam):

Max. 124 min with BCT-D124L cassette

#### Fast forward/rewind time:

Approx. 3 min with BCT-D124L cassette

#### Search speed range

±50 times normal playback speed

#### Servo lock time:

0.5 s or less (from standby on)

#### Load/unload time:

6 s or less

### Input/output signals

#### Analog composite input:

BNC (x2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative

#### Analog composite output:

BNC (x3, including one character out), 1.0 Vp-p, 75 Ω, sync negative

#### Analog component input:

BNC (x3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

#### Analog component output:

BNC (x3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

#### SDI input:

BNC (x2, including one active through out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

#### SDI output:

BNC (x3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

#### HD-SDI output (option):

BNC (x3)

#### Analog audio input:

XLR (x4) (4CH: channel selectable)

#### Analog audio output:

XLR (x4) (4CH: channel selectable)

#### Cue audio input:

XLR (x1, only Digital Betacam recording)

#### Cue audio output:

XLR (x1, only Digital Betacam playback)

#### Digital audio input:

BNC (x2), 4 channels, AES/EBU, default 48 kHz (32 to 48 kHz with sample rate converter), complies with AES-31d-1995

#### Digital audio output:

BNC (x2), 4 channels, AES/EBU, 48 kHz fixed, complies with AES-31d-1995

#### Remote control

##### Remote (RS-422A):

D-sub 9-pin (x2), Sony 9-pin remote interface

##### RS-232C (ISR\*):

D-sub 9-pin (x1), RS-232C interface

##### Parallel remote:

D-sub 50-pin (x1)

##### Video control:

D-sub 15-pin (x1, for connection with BVR-50 Video Controller)

D-sub 9-pin (x1, for connection with HKDV-503/900 Video Controller)

#### Control panel:

Circular connector 10-pin

#### Time code input:

XLR (x1)

#### Time code output:

XLR (x1)

#### Memory card insertion slot:

Memory Stick slot (x1)

#### Monitor output L/R:

XLR (x2) (channel selectable)

#### Phones:

JM-60 Stereo phone jack

### Processor adjustment range

#### Video level:

±3 dB/ -∞ to 3 dB selectable

#### Chroma level:

±3 dB/ -∞ to 3 dB selectable

#### Set up/black level:

±30 IRE/±210 mV

#### Chroma phase/hue:

±30°

#### System sync phase:

±15 μs

#### System SC phase:

±200 ns

#### Composite input level:

±3 dB

### Digital video performance

#### Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

#### Quantization:

10 bits/sample

#### Error correction:

Reed-Solomon code

#### Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 62 dB or more, K-factor (2T pulse): 1% or less

#### Analog component input to analog component output:

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more, K-factor (2T pulse): 1% or less, LF non-linearity: 3% or less

#### Analog composite input to analog composite output:

A/D and D/A quantization: 10 bits/sample,

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more, Differential gain: 2% or less, Differential phase: 2° or less

Y/C delay: 20 ns or less, K-factor (2T pulse): 1% or less

### Digital audio performance

#### Sampling frequency:

48 kHz (synchronized with video)

#### Quantization:

20 bits/sample

#### Analog input to analog output:

Frequency response (0 dB at 1 kHz): 20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON): More than 95 dB

Distortion (at 1 kHz, emphasis ON, reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two channels): Less than -80 dB, Wow & flutter: Below measurable level

#### Head room:

20 dB (18 dB selectable)

#### Emphasis (ON/OFF selectable in REC mode):

T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## Digital Betacam VTRs

### DVW-2000P Digital Betacam Recorder

#### Features

- Superb picture quality and high sound quality of Digital Betacam format
- HD upconversion output capability (1080/50i)(option: \*1)
- Compact 4U height design and light weight
- High-quality four-channel 20-bit digital audio
- Long recording time of 124 minutes on an L-cassette and 40 minutes on an S-cassette
- Versatile interfaces including SDI I/O, analog component I/O, digital and analog audio I/O, time code I/O, analog composite I/O and 50-pin parallel remote interface as standard
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Digital audio jog sound
- High-speed picture search
- Variable speed playback
- Dynamic Motion Control (DMC) functionality
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer to read and write information onto and from a cassette with an optional Tele-File label attached
- Remote maintenance and monitoring over an Ethernet network using the optional BZNW-1000 ISR Proxy software
- Optional remote control panel BKDW-101
- Built-in signal generator
- Can be installed in LMS and Flexicart systems

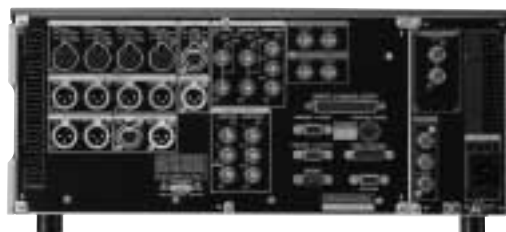
(\*1) Requires the optional BKMW-104 board.

#### Supplied Accessories

PSW 4x16 rack mount screws (4)  
 Operation manual (1)  
 Installation manual (1)

#### Optional Accessories

BKDW-101 Remote Control Panel  
 BKMW-102 Remote Control Unit  
 BKMW-103 Control Panel Extension Kit  
 BKMW-104 HD Up-converter Board  
 RCC-G Cables 9-pin/9-pin Cable  
 RMM-131 Rack Mount Kit  
 BVR-50P TBC Remote Controller  
 MLB-1M-100 Tele-File Memory Label  
 MSH "Memory Stick" IC Memory Media  
 BCT-D tapes BCT-D Series Digital BETACAM Tapes



# Digital Betacam VTRs

## Specifications

### General

#### Power requirements:

AC 100 V to 240 V, 50/60 Hz

#### Power consumption:

200 W

#### Operating temperature:

+5°C to +40°C (+41°F to +104°F)

#### Storage temperature:

-20°C to +60°C (-4°F to +140°F)

#### Humidity:

20% to 90% (relative humidity)

#### Mass:

23.5 kg (52 lb 11 oz)

#### Dimensions (W x H x D):

427 x 174 x 544 mm (16 7/8x 6 7/8x 21 1/2 inches)

#### Tape speed

96.7 mm/s

#### Recording/playback time (Digital Betacam):

Max. 124 min with BCT-D124L cassette

#### Fast forward/rewind time:

Approx. 3 min with BCT-D124L cassette

#### Search speed range

±50 times normal playback speed

#### Servo lock time:

0.7 s or less (from standby on)

#### Load/unload time:

6 s or less

### Input/output signals

#### Analog composite input:

BNC (x2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative

#### Analog composite output:

BNC (x3, including one character out), 1.0 Vp-p, 75 Ω, sync negative

#### Analog component input:

BNC (x3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

#### Analog component output:

BNC (x3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

#### SDI input:

BNC (x2, including one active through out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

#### SDI output:

BNC (x3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

#### HD-SDI output (option):

BNC (x3)

#### Analog audio input:

XLR (x4) (4CH: channel selectable)

#### Analog audio output:

XLR (x4) (4CH: channel selectable)

#### Cue audio input:

XLR (x1, only Digital Betacam recording)

#### Cue audio output:

XLR (x1, only Digital Betacam playback)

#### Digital audio input:

BNC (x2), 4 channels, AES/EBU, default 48 kHz (32 to 48 kHz with sample rate converter), complies with AES-31d-1995

#### Digital audio output:

BNC (x2), 4 channels, AES/EBU, 48 kHz fixed, complies with AES-31d-1995

#### Remote control

##### Remote (RS-422A):

D-sub 9-pin (x2), Sony 9-pin remote interface

##### RS-232C (ISR\*):

D-sub 9-pin (x1), RS-232C interface

##### Parallel remote:

D-sub 50-pin (x1)

##### Video control:

D-sub 15-pin (x1, for connection with BVR-50P Video Controller)

D-sub 9-pin (x1, for connection with HKDV-503/900 Video Controller)

#### Control panel:

Circular connector 10-pin

#### Time code input:

XLR (x1)

#### Time code output:

XLR (x1)

#### Memory card insertion slot:

Memory Stick slot (x1)

#### Monitor output L/R:

XLR (x2) (channel selectable)

#### Phones:

JM-60 Stereo phone jack

### Processor adjustment range

#### Video level:

±3 dB/ -∞ to 3 dB selectable

#### Chroma level:

±3 dB/ -∞ to 3 dB selectable

#### Set up/black level:

±30 IRE/±210 mV

#### Chroma phase/hue:

±30°

#### System sync phase:

±15 μs

#### System SC phase:

±200 ns

#### Composite input level:

±3 dB

### Digital video performance

#### Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

#### Quantization:

10 bits/sample

#### Error correction:

Reed-Solomon code

#### Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 62 dB or more, K-factor (2T pulse): 1% or less

#### Analog component input to analog component output:

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more, K-factor (2T pulse): 1% or less, LF non-linearity: 3% or less

#### Analog composite input to analog composite output:

A/D and D/A quantization: 10 bits/sample,

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more, Differential gain: 2% or less, Differential phase: 2° or less

Y/C delay: 20 ns or less, K-factor (2T pulse): 1% or less

### Digital audio performance

#### Sampling frequency:

48 kHz (synchronized with video)

#### Quantization:

20 bits/sample

#### Analog input to analog output:

Frequency response (0 dB at 1 kHz): 20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON): More than 95 dB

Distortion (at 1 kHz, emphasis ON, reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two channels): Less than -80 dB, Wow & flutter: Below measurable level

#### Head room:

20 dB (18 dB selectable)

#### Emphasis (ON/OFF selectable in REC mode):

T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

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## MPEG IMX VTRs

### MSW-M2000 MPEG IMX Recorder (/1 model)

#### Features

- Superb picture quality and high sound quality of MPEG IMX format
- 8-bit 4:2:2 component digital recording
- MPEG-2 4:2:2P@ML data compression at 50 Mb/s
- Legacy playback of MPEG IMX, Digital Betacam, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface to allow audio and video materials to be sent and received across a standard network (option: \*1)
- SDTI-CP(Serial Data Transport Interface - Content Package) output allows interface with SDTI-CP equipped devices such as servers, non-linear editors
- Data transfer at up to twice normal speed as standard
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option: \*2)
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed playback
- High speed color picture search
- Dynamic Motion Control (DMC)
- Long recording and playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Versatile interfaces; analog composite I/O, analog component I/O, SDI I/O, SDTI-CP I/O, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), and audio monitor (2-ch)
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detect function(\*3)
- Optional remote control panel BKMW-101

(\*1) Requires optional BKMW-E3000 Network Interface Board (\*2) Requires optional BKMW-104 HD Upconverter Board (\*3) May require software upgrade. For details, please contact your nearest Sony office.

#### Supplied Accessories

PSW 4x16 rack mount screws (4)  
Operation manual (1)  
Installation manual (1)

#### Optional Accessories

BKMW-101 Remote Control Panel  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
BKMW-104 HD Up-converter Board  
BKMW-E3000 Network Interface Board (option for e-VTR)  
RCC-G Cables 9-pin/9-pin Cable  
RMM-131 Rack Mount Kit  
MLB-1M-100 Tele-File Memory Label  
JZ-1 Videocassette logging software  
BCT-MX tapes BCT-MX Series MPEG IMX Tapes  
MSH "Memory Stick" IC Memory Media



# MPEG IMX VTRs

## Specifications

### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

2A (200 W) / AC 240 V

Operating temperature:

+5 to +40 °C (+41 to +104 ° F)

Storage temperature:

-20 to +60 °C (-4 to +140 ° F)

Humidity:

20 to 90% (relative humidity)

Mass:

23.0 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7 / 8 x 6 7 / 8 x 21 1 / 2 inches)

Tape speed

MPEG IMX:

64.467 (525)/53.776 (625) mm/s

Digital Betacam:

96.7 mm/s

Betacam SX:

59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:

118.6 (525)/101.51 (625) mm/s

Recording/playback time:

Max. 184 (525)/220 (625) min with

BCT-184MXL cassette

Fast forward/rewind time:

Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:

±78 times normal playback speed

Digital Betacam:

±50 times normal playback speed

Betacam SX:

±78 times normal playback speed

Betacam/Betacam SP:

±35 (525)/±42 (625) times normal  
playback speed

Servo lock time:

0.5 (525)/0.7 (625) s or less (from standby  
on)

Load/unload time:

6 s or less

### Input/output signals

Analog composite input:

BNC (2, including one loop through  
output), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:

BNC (3, including one character out), 1.0  
Vp-p, 75 Ω, sync negative

Analog component input:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p,  
75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  
Ω

Analog component output:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p,  
75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  
Ω

SDI input:

BNC (2, including one active through out),  
SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDI output:

BNC (3, including one character out),  
SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP input:

BNC (1), SMPTE 326M (SDTI-CP)

SDTI-CP output:

BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI output (requires optional BKMW-104  
board):

BNC (x3)

Analog audio input:

XLR (4) (4CH: channel selectable)

Analog audio output:

XLR (4) (4CH: channel selectable)

Cue audio output (only Digital Betacam

playback):

XLR (1)

Digital audio input (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), default 48 kHz (32 to 48 kHz with  
sample rate converter), complies with  
AES-3id-1995

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), 48 kHz fixed, Complies with  
AES-3id-1995

Remote control

Remote (RS-422A):

D-sub 9-pin (2), Sony 9-pin remote  
interface

RS-232C (ISR\*):

D-sub 9-pin (1), RS-232C interface

Parallel remote:

D-sub 50-pin (1)

Video control (1):

D-sub 15-pin (1)

Control panel:

Circular connector 10-pin

Time code input:

XLR (1)

Time code output:

XLR (1)

Ethernet I/F (requires optional BKMW-E3000  
board):

RJ-45 connector (1),  
1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:

Memory Stick (1), PCMCIA (1)

Monitor output L/R:

XLR (2) (channel selectable)

Phones:

JM-60 Stereo phone jack

### Processor adjustment range

Video level:

±3 dB/-∞ to 3 dB selectable

Chroma level:

±3 dB/-∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±15 μs

System SC phase:

±200 ns

Y/C delay:

±100 ns (Betacam/Betacam SP playback  
only)

Composite input level:

±3 dB

### Digital video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

MPEG IMX/Betacam SX: 8 bits/sample

Error correction:

Reed-Solomon code

Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz ±0.5 dB

S/N ratio: 56 dB or more K-factor (2T  
pulse): 1% or less

Analog component input to analog

component output (MPEG IMX

record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more K-factor (2T  
pulse): 1% or less LF non-linearity: 3.0% or  
less

Analog composite input to analog composite

output (MPEG IMX record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 53 dB or more Differential gain:

2% or less Differential phase: 2° or less

Y/C delay: 20 ns or less K-factor (2T

pulse): 1% or less

### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

MPEG IMX: 16 or 24 bits/sample

(selectable)

Betacam SX: 16 bits/sample

Analog input to analog output (MPEG IMX

record/playback):

A/D and D/A quantization: 24 bits/sample

Frequency response (0 dB at 1kHz): 20 Hz  
to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):

More than 90 dB (16 bits mode), More than  
95 dB (24bits mode)

Distortion (at 1 kHz, emphasis ON,  
reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two  
channels): Less than -80 dB

Wow and flutter: Below measurable level

Head room:

20 dB (18 dB selectable)

Emphasis (ON/OFF selectable in REC mode):

T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

# MSW-M2000P MPEG IMX Recorder (/1 model)

### Features

- Superb picture quality and high sound quality of MPEG IMX format
- 8-bit 4:2:2 component digital recording
- MPEG-2 4:2:2P@ML data compression at 50 Mb/s
- Legacy playback of MPEG IMX, Digital Betacam, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface to allow audio and video materials to be sent and received across a standard network (option:\*1)
- SDTI-CP(Serial Data Transport Interface - Content Package) output allows interface with SDTI-CP equipped devices such as servers, non-linear editors
- Data transfer at up to twice normal speed as standard
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option:\*2)
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed control
- High speed color picture search
- Dynamic Motion Control (DMC)
- Long recording and playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Versatile interfaces; analog composite I/O, analog component I/O, SDI I/O, SDTI-CP I/O, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), and audio monitor (2-ch)
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detect function (\*3)
- Optional remote control panel BKMW-101

(\*1) Requires optional BKMW-E3000 Network Interface Board (\*2) Requires optional BKMW-104 HD Upconverter Board (\*3) May require software upgrade. For details, please contact your nearest Sony office.

### Supplied Accessories

PSW 4x16 rack mount screws (4)  
 Operation manual (1)  
 Installation manual (1)

### Optional Accessories

BKMW-101 Remote Control Panel  
 BKMW-102 Remote Control Unit  
 BKMW-103 Control Panel Extension Kit  
 BKMW-104 HD Up-converter Board  
 BKMW-E3000 Network Interface Board  
 (option for e-VTR)  
 RCC-G Cables 9-pin/9-pin Cable  
 RMM-131 Rack Mount Kit  
 MLB-1M-100 Tele-File Memory Label  
 JZ-1 Videocassette logging software  
 BCT-MX tapes BCT-MX Series MPEG IMX  
 Tapes  
 MSH "Memory Stick" IC Memory Media



## MPEG IMX VTRs

### Specifications

#### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

2A (200 W) / AC 240 V

Operating temperature:

+5 to +40 °C (+41 to +104 ° F)

Storage temperature:

-20 to +60 °C (-4 to +140 ° F)

Humidity:

20 to 90% (relative humidity)

Mass:

23.0 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:

64.467 (525)/53.776 (625) mm/s

Digital Betacam:

96.7 mm/s

Betacam SX:

59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:

118.6 (525)/101.51 (625) mm/s

Recording/playback time:

Max. 184 (525)/220 (625) min with

BCT-184MXL cassette

Fast forward/rewind time:

Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:

±78 times normal playback speed

Digital Betacam:

±50 times normal playback speed

Betacam SX:

±78 times normal playback speed

Betacam/Betacam SP:

±35 (525)/±42 (625) times normal playback speed

Servo lock time:

0.5 (525)/0.7 (625) s or less (from standby on)

Load/unload time:

6 s or less

#### Input/output signals

Analog composite input:

BNC (2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:

BNC (3, including one character out), 1.0 Vp-p, 75 Ω, sync negative

Analog component input:

BNC (x 3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

Analog component output:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

SDI input:

BNC (2, including one active through out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDI output:

BNC (3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP input:

BNC (1), SMPTE 326M (SDTI-CP)

SDTI-CP output:

BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI output (requires optional BKMW-104 board):

BNC (3)

Analog audio input:

XLR (4) (4CH: channel selectable)

Analog audio output:

XLR (4) (4CH: channel selectable)

Cue audio output (only Digital Betacam playback):

XLR (1)

Digital audio input (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), default 48 kHz (32 to 48 kHz with sample rate converter), complies with AES-3id-1995

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), 48 kHz fixed, Complies with AES-3id-1995

Remote control

Remote (RS-422A):

D-sub 9-pin (2), Sony 9-pin remote interface

RS-232C (ISR\*):

D-sub 9-pin (1), RS-232C interface

Parallel remote:

D-sub 50-pin (1)

Video control (1):

D-sub 15-pin (1)

Control panel:

Circular connector 10-pin

Time code input:

XLR (1)

Time code output:

XLR (1)

Ethernet I/F (requires optional BKMW-E3000 board):

RJ-45 connector (1), 1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:

Memory Stick (1), PCMCIA (1)

Monitor output L/R:

XLR (2) (channel selectable)

Phones:

JM-60 Stereo phone jack

#### Processor adjustment range

Video level:

±3 dB/-∞ to 3 dB selectable

Chroma level:

±3 dB/-∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±15 μs

System SC phase:

±200 ns

Y/C delay:

±100 ns (Betacam/Betacam SP playback only)

Composite input level:

±3 dB

#### Digital video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

MPEG IMX/Betacam SX: 8 bits/sample

Error correction:

Reed-Solomon code

Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz ±0.5 dB

S/N ratio: 56 dB or more K-factor (2T pulse): 1% or less

Analog component input to analog

component output (MPEG IMX

record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less LF non-linearity: 3.0% or less

Analog composite input to analog composite

output (MPEG IMX record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 53 dB or more Differential gain:

2% or less Differential phase: 2° or less

Y/C delay: 20 ns or less K-factor (2T

pulse): 1% or less

#### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

MPEG IMX: 16 or 24 bits/sample

(selectable)

Betacam SX: 16 bits/sample

Analog input to analog output (MPEG IMX

record/playback):

A/D and D/A quantization: 24 bits/sample

Frequency response (0 dB at 1kHz): 20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):

More than 90 dB (16 bits mode), More than 95 dB (24bits mode)

Distortion (at 1 kHz, emphasis ON, reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two channels): Less than -80 dB

Wow and flutter: Below measurable level

Head room:

20 dB (18 dB selectable)

Emphasis (ON/OFF selectable in REC mode):

T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

# MSW-M2000E MPEG IMX Recorder (with Network Interface Board installed)

### Features

- Superb picture quality and high sound quality of MPEG IMX format
- 8-bit 4:2:2 component digital recording
- MPEG-2 4:2:2P@ML data compression at 50 Mb/s
- Legacy playback of MPEG IMX, Digital Betacam, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface as standard to allow audio and video materials to be sent and received across a standard network
- SDTI-CP output allows interface with SDTI-CP equipped devices such as servers, nonlinear editors
- Data transfer at up to twice normal speed as standard
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option:\*1)
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed playback
- High speed color picture search
- Dynamic Motion Control (DMC)
- Long recording and playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Versatile interfaces; analog composite I/O, analog component I/O, SDI I/O, SDTI-CP I/O, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), and audio monitor (2-ch)
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detect function(\*2)
- Optional remote control panel BKMW-101

(\*1)Requires optional BKMW-104 HD Upconverter Board (\*2)May require software upgrade. For details, please contact your nearest Sony office.

### Supplied Accessories

PSW 4x16 rack mount screws (4)  
Operation manual (1)  
Installation manual (1)

### Optional Accessories

BKMW-101 Remote Control Panel  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
BKMW-104 HD Up-converter Board  
RCC-G Cables 9-pin/9-pin Cable  
RMM-131 Rack Mount Kit  
MLB-1M-100 Tele-File Memory Label  
BCT-MX tapes BCT-MX Series MPEG IMX Tapes  
MSH "Memory Stick" IC Memory Media



## MPEG IMX VTRs

### Specifications

#### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

2A (200 W) / AC 240 V

Operating temperature:

+5 to +40 °C (+41 to +104 ° F)

Storage temperature:

-20 to +60 °C (-4 to +140 ° F)

Humidity:

20 to 90% (relative humidity)

Mass:

23.0 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:

64.467 (525)/53.776 (625) mm/s

Digital Betacam:

96.7 mm/s

Betacam SX:

59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:

118.6 (525)/101.51 (625) mm/s

Recording/playback time:

Max. 184 (525)/220 (625) min with

BCT-184MXL cassette

Fast forward/rewind time:

Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:

±78 times normal playback speed

Digital Betacam:

±50 times normal playback speed

Betacam SX:

±78 times normal playback speed

Betacam/Betacam SP:

±35 (525)/±42 (625) times normal playback speed

Servo lock time:

0.5 (525)/0.7 (625) s or less (from standby on)

Load/unload time:

6 s or less

#### Input/output signals

Analog composite input:

BNC (2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:

BNC (3, including one character out), 1.0 Vp-p, 75 Ω, sync negative

Analog component input:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

Analog component output:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

SDI input:

BNC (2, including one active through out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDI output:

BNC (3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP input:

BNC (1), SMPTE 326M (SDTI-CP)

SDTI-CP output:

BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI output (requires optional BKMW-104 board):

BNC (x3)

Analog audio input:

XLR (4) (4CH: channel selectable)

Analog audio output:

XLR (4) (4CH: channel selectable)

Cue audio output (only Digital Betacam playback):

XLR (1)

Digital audio input (CH 1/2, 3/4, 5/6, 7/8), AES/EBU:

BNC (4), default 48 kHz (32 to 48 kHz with sample rate converter), complies with AES-3id-1995

Digital audio output (CH 1/2, 3/4, 5/6, 7/8), AES/EBU:

BNC (4), 48 kHz fixed, Complies with AES-3id-1995

Remote control

Remote (RS-422A):

D-sub 9-pin (2), Sony 9-pin remote interface

RS-232C (ISR\*):

D-sub 9-pin (1), RS-232C interface

Parallel remote:

D-sub 50-pin (1)

Video control (1):

D-sub 15-pin (1)

Control panel:

Circular connector 10-pin

Time code input:

XLR (1)

Time code output:

XLR (1)

Ethernet I/F:

RJ-45 connector (1), 1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:

Memory Stick (1), PCMCIA (1)

Monitor output L/R:

XLR (2) (channel selectable)

Phones:

JM-60 Stereo phone jack

#### Processor adjustment range

Video level:

±3 dB/-∞ to 3 dB selectable

Chroma level:

±3 dB/-∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±15 μs

System SC phase:

±200 ns

Y/C delay:

±100 ns (Betacam/Betacam SP playback only)

Composite input level:

±3 dB

#### Digital video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

MPEG IMX/Betacam SX: 8 bits/sample

Error correction:

Reed-Solomon code

Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz ±0.5 dB

S/N ratio: 56 dB or more K-factor (2T pulse): 1% or less

Analog component input to analog

component output (MPEG IMX

record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less LF non-linearity: 3.0% or less

Analog composite input to analog composite

output (MPEG IMX record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 53 dB or more Differential gain:

2% or less Differential phase: 2° or less

Y/C delay: 20 ns or less K-factor (2T

pulse): 1% or less

#### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

MPEG IMX: 16 or 24 bits/sample

(selectable)

Betacam SX: 16 bits/sample

Analog input to analog output (MPEG IMX

record/playback):

A/D and D/A quantization: 24 bits/sample

Frequency response (0 dB at 1 kHz): 20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):

More than 90 dB (16 bits mode), More than

95 dB (24bits mode)

Distortion (at 1 kHz, emphasis ON,

reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two

channels): Less than -80 dB

Wow and flutter: Below measurable level

Head room:

20 dB (18 dB selectable)

Emphasis (ON/OFF selectable in REC mode):

T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

# MSW-M2000EP MPEG IMX Recorder (with Network Interface Board installed)

### Features

- Superb picture quality and high sound quality of MPEG IMX format
- 8-bit 4:2:2 component digital recording
- MPEG-2 4:2:2P@ML data compression at 50 Mb/s
- Legacy playback of MPEG IMX, Digital Betacam, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface as standard to allow audio and video materials to be sent and received across a standard network
- SDTI-CP(\*1) output allows interface with SDTI-CP equipped devices such as servers, nonlinear editors
- Data transfer at up to twice normal speed as standard
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option:\*2)
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed playback
- High speed color picture search
- Dynamic Motion Control (DMC)
- Long recording and playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Versatile interfaces; analog composite I/O, analog component I/O, SDI I/O, SDTI-CP I/O, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), and audio monitor (2-ch)
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detect function(\*3)
- Optional remote control panel BKMW-101

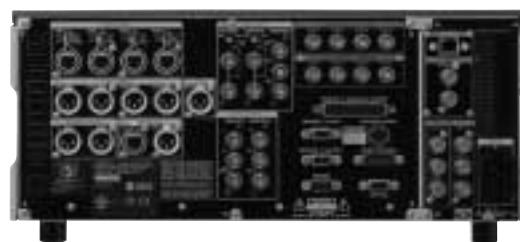
(\*1)Requires optional BKMW-104 HD Upconverter Board (\*2)May require software upgrade. For details, please contact your nearest Sony office.

### Supplied Accessories

PSW 4x16 rack mount screws (4)  
Operation manual (1)  
Installation manual (1)

### Optional Accessories

BKMW-101 Remote Control Panel  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
BKMW-104 HD Up-converter Board  
RCC-G Cables 9-pin/9-pin Cable  
RMM-131 Rack Mount Kit  
MLB-1M-100 Tele-File Memory Label  
BCT-MX tapes BCT-MX Series MPEG IMX Tapes  
MSH "Memory Stick" IC Memory Media



## MPEG IMX VTRs

### Specifications

#### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

2A (200 W) / AC 240 V

Operating temperature:

+5 to +40 °C (+41 to +104 ° F)

Storage temperature:

-20 to +60 °C (-4 to +140 ° F)

Humidity:

20 to 90% (relative humidity)

Mass:

23.0 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:

64.467 (525)/53.776 (625) mm/s

Digital Betacam:

96.7 mm/s

Betacam SX:

59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:

118.6 (525)/101.51 (625) mm/s

Recording/playback time:

Max. 184 (525)/220 (625) min with

BCT-184MXL cassette

Fast forward/rewind time:

Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:

±78 times normal playback speed

Digital Betacam:

±50 times normal playback speed

Betacam SX:

±78 times normal playback speed

Betacam/Betacam SP:

±35 (525)/±42 (625) times normal playback speed

Servo lock time:

0.5 (525)/0.7 (625) s or less (from standby on)

Load/unload time:

6 s or less

#### Input/output signals

Analog composite input:

BNC (2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:

BNC (3, including one character out), 1.0 Vp-p, 75 Ω, sync negative

Analog component input:

BNC (x 3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

Analog component output:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

SDI input:

BNC (2, including one active through out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDI output:

BNC (3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP input:

BNC (1), SMPTE 326M (SDTI-CP)

SDTI-CP output:

BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI output (requires optional BKMW-104 board):

BNC (3)

Analog audio input:

XLR (4) (4CH: channel selectable)

Analog audio output:

XLR (4) (4CH: channel selectable)

Cue audio output (only Digital Betacam

playback):

XLR (1)

Digital audio input (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), default 48 kHz (32 to 48 kHz with sample rate converter), complies with AES-3id-1995

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), 48 kHz fixed, Complies with AES-3id-1995

Remote control

Remote (RS-422A):

D-sub 9-pin (2), Sony 9-pin remote interface

RS-232C (ISR\*):

D-sub 9-pin (1), RS-232C interface

Parallel remote:

D-sub 50-pin (1)

Video control (1):

D-sub 15-pin (1)

Control panel:

Circular connector 10-pin

Time code input:

XLR (1)

Time code output:

XLR (1)

Ethernet I/F:

RJ-45 connector (1), 1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:

Memory Stick (1), PCMCIA (1)

Monitor output L/R:

XLR (2) (channel selectable)

Phones:

JM-60 Stereo phone jack

#### Processor adjustment range

Video level:

±3 dB/-∞ to 3 dB selectable

Chroma level:

±3 dB/-∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±15 μs

System SC phase:

±200 ns

Y/C delay:

±100 ns (Betacam/Betacam SP playback only)

Composite input level:

±3 dB

#### Digital video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

MPEG IMX/Betacam SX: 8 bits/sample

Error correction:

Reed-Solomon code

Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz ±0.5 dB

S/N ratio: 56 dB or more K-factor (2T pulse): 1% or less

Analog component input to analog

component output (MPEG IMX

record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less LF non-linearity: 3.0% or less

Analog composite input to analog composite

output (MPEG IMX record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 53 dB or more Differential gain:

2% or less Differential phase: 2° or less

Y/C delay: 20 ns or less K-factor (2T

pulse): 1% or less

#### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

MPEG IMX: 16 or 24 bits/sample

(selectable)

Betacam SX: 16 bits/sample

Analog input to analog output (MPEG IMX

record/playback):

A/D and D/A quantization: 24 bits/sample

Frequency response (0 dB at 1 kHz): 20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):

More than 90 dB (16 bits mode), More than 95 dB (24bits mode)

Distortion (at 1 kHz, emphasis ON, reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two channels): Less than -80 dB

Wow and flutter: Below measurable level

Head room:

20 dB (18 dB selectable)

Emphasis (ON/OFF selectable in REC mode):

T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

# MSW-A2000 MPEG IMX Recorder (/1 model)

### Features

- Superb picture quality and high sound quality of MPEG IMX format
- 8-bit 4:2:2 component digital recording
- MPEG-2 4:2:2P@ML data compression at 50 Mb/s
- Legacy playback capability of MPEG IMX, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface to allow audio and video materials to be sent and received across a standard network (option:\*1)
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option:\*2)
- SDTI-CP(Serial Data Transport Interface - Content Package) output allows interface with SDTI-CP equipped devices such as servers, non-linear editors
- Data transfer at up to twice normal speed as standard
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed playback
- High speed color picture search
- Dynamic Motion Control (DMC)
- Long recording and playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Versatile interfaces; analog composite I/O, analog component I/O, SDI I/O, SDTI-CP I/O, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), and audio monitor (2-ch)
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detect function (\*3)
- Optional remote control panel BKMW-101

(\*1) Requires optional BKMW-E3000 Network Interface Board (\*2) Requires optional BKMW-104 HD Upconverter Board (\*3) May require software upgrade. For details, please contact your nearest Sony office.

### Supplied Accessories

PSW 4x16 rack mount screws (4)  
Operation manual (1)  
Installation manual (1)

### Optional Accessories

BKMW-101 Remote Control Panel  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
BKMW-104 HD Up-converter Board  
BKMW-E3000 Network Interface Board  
(option for e-VTR)  
RCC-G Cables 9-pin/9-pin Cable  
RMM-131 Rack Mount Kit  
MLB-1M-100 Tele-File Memory Label  
JZ-1 Videocassette logging software  
BCT-MX tapes BCT-MX Series MPEG IMX  
Tapes  
MSH "Memory Stick" IC Memory Media



## MPEG IMX VTRs

### Specifications

#### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

2A (200 W) / AC 240 V

Operating temperature:

+5 to +40 °C (+41 to +104 ° F)

Storage temperature:

-20 to +60 °C (-4 to +140 ° F)

Humidity:

20 to 90% (relative humidity)

Mass:

23.0 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm  
(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:

64.467 (525)/53.776 (625) mm/s

Betacam SX:

59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:

118.6 (525)/101.51 (625) mm/s

Recording/playback time:

Max. 184 (525)/220 (625) min with  
BCT-184MXL cassette

Fast forward/rewind time:

Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:

±78 times normal playback speed

Betacam SX:

±78 times normal playback speed

Betacam/Betacam SP:

±35 (525)/±42 (625) times normal  
playback speed

Servo lock time:

0.5 (525)/0.7 (625) s or less (from standby  
on)

Load/unload time:

6 s or less

#### Input/output signals

Analog composite input:

BNC (2, including one loop through  
output), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:

BNC (3, including one character out), 1.0  
Vp-p, 75 Ω, sync negative

Analog component input:

BNC (x 3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p,  
75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  
Ω

Analog component output:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p,  
75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  
Ω

SDI input:

BNC (2, including one active through out),  
SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDI output:

BNC (3, including one character out),  
SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP input:

BNC (1), SMPTE 326M (SDTI-CP)

SDTI-CP output:

BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI output (requires optional BKMW-104  
board):

BNC (3)

Analog audio input:

XLR (4) (4CH: channel selectable)

Analog audio output:

XLR (4) (4CH: channel selectable)

Digital audio input (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), default 48 kHz (32 to 48 kHz with  
sample rate converter), complies with  
AES-3id-1995

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), 48 kHz fixed, Complies with  
AES-3id-1995

Remote control

Remote (RS-422A):

D-sub 9-pin (2), Sony 9-pin remote  
interface

RS-232C (ISR\*):

D-sub 9-pin (1), RS-232C interface

Parallel remote:

D-sub 50-pin (1)

Video control (1):

D-sub 15-pin (1)

Control panel:

Circular connector 10-pin

Time code input:

XLR (1)

Time code output:

XLR (1)

Ethernet I/F (requires optional BKMW-E3000  
board):

RJ-45 (1),

1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:

Memery Stick (1), PCMCIA (1)

Monitor output L/R:

XLR (2) (channel selectable)

Phones:

JM-60 Stereo phone jack

#### Processor adjustment range

Video level:

±3 dB/-∞ to 3 dB selectable

Chroma level:

±3 dB/-∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±15 μs

System SC phase:

±200 ns

Y/C delay:

±100 ns (Betacam/Betacam SP playback  
only)

Composite input level:

±3 dB

#### Digital video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

MPEG IMX/Betacam SX: 8 bits/sample

Error correction:

Reed-Solomon code

Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz ±0.5 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less

Analog component input to analog

component output (MPEG IMX

record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less LF non-linearity: 3.0% or  
less

Analog composite input to analog composite  
output (MPEG IMX record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 53 dB or more Differential gain:

2% or less Differential phase: 2° or less

Y/C delay: 20 ns or less K-factor (2T  
pulse): 1% or less

#### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

MPEG IMX: 16 or 24 bits/sample  
(selectable)

Betacam SX: 16 bits/sample

Analog input to analog output (MPEG IMX  
record/playback):

A/D and D/A quantization: 24 bits/sample

Frequency response (0 dB at 1 kHz): 20 Hz  
to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):

More than 90 dB (16 bits mode), More than

95 dB (24bits mode)

Distortion (at 1 kHz, emphasis ON,

reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two

channels): Less than -80 dB

Wow and flutter: Below measurable level

Head room:

20 dB (18 dB selectable)

Emphasis (ON/OFF selectable in REC mode):

T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

# MSW-A2000P MPEG IMX Recorder (/1 model)

### Features

- Superb picture quality and high sound quality of MPEG IMX format
- 8-bit 4:2:2 component digital recording
- MPEG-2 4:2:2P@ML data compression at 50 Mb/s
- Legacy playback capability of MPEG IMX, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface to allow audio and video materials to be sent and received across a standard network (option:\*1)
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option:\*2)
- SDTI-CP(Serial Data Transport Interface - Content Package) output allows interface with SDTI-CP equipped devices such as servers, non-linear editors
- Data transfer at up to twice normal speed as standard
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- \*Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed playback
- High speed color picture search
- Dynamic Motion Control (DMC)
- Long recording and playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Versatile interfaces; analog composite I/O, analog component I/O, SDI I/O, SDTI-CP I/O, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), and audio monitor (2-ch)
- Easy setup using "Memory Stick" media
- Shot mark handling
- UMID handling
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detect function (\*3)
- Optional remote control panel BKMW-101

(\*1) Requires optional BKMW-E3000 Network Interface Board (\*2) Requires optional BKMW-104 HD Upconverter Board (\*3) May require software upgrade. For details, please contact your nearest Sony office.

### Supplied Accessories

PSW 4x16 rack mount screws (4)  
Operation manual (1)  
Installation manual (1)

### Optional Accessories

BKMW-101 Remote Control Panel  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
BKMW-104 HD Up-converter Board  
BKMW-E3000 Network Interface Board (option for e-VTR)  
RCC-G Cables 9-pin/9-pin Cable  
RMM-131 Rack Mount Kit  
MLB-1M-100 Tele-File Memory Label  
JZ-1 Videocassette logging software  
BCT-MX tapes BCT-MX Series MPEG IMX Tapes  
MSH "Memory Stick" IC Memory Media



## MPEG IMX VTRs

### Specifications

#### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

2A (200 W) / AC 240 V

Operating temperature:

+5 to +40 °C (+41 to +104 ° F)

Storage temperature:

-20 to +60 °C (-4 to +140 ° F)

Humidity:

20 to 90% (relative humidity)

Mass:

23.0 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:

64.467 (525)/53.776 (625) mm/s

Betacam SX:

59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:

118.6 (525)/101.51 (625) mm/s

Recording/playback time:

Max. 184 (525)/220 (625) min with

BCT-184MXL cassette

Fast forward/rewind time:

Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:

±78 times normal playback speed

Betacam SX:

±78 times normal playback speed

Betacam/Betacam SP:

±35 (525)/±42 (625) times normal

playback speed

Servo lock time:

0.5 (525)/0.7 (625) s or less (from standby on)

Load/unload time:

6 s or less

#### Input/output signals

Analog composite input:

BNC (2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:

BNC (3, including one character out), 1.0 Vp-p, 75 Ω, sync negative

Analog component input:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

Analog component output:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

SDI input:

BNC (2, including one active through out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDI output:

BNC (3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP input:

BNC (1), SMPTE 326M (SDTI-CP)

SDTI-CP output:

BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI output (requires optional BKMW-104 board):

BNC (3)

Analog audio input:

XLR (4) (4CH: channel selectable)

Analog audio output:

XLR (4) (4CH: channel selectable)

Digital audio input (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), default 48 kHz (32 to 48 kHz with sample rate converter), complies with AES-31d-1995

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), 48 kHz fixed, Complies with AES-31d-1995

Remote control

Remote (RS-422A):

D-sub 9-pin (2), Sony 9-pin remote interface

RS-232C (ISR\*):

D-sub 9-pin (1), RS-232C interface

Parallel remote:

D-sub 50-pin (1)

Video control (1):

D-sub 15-pin (1)

Control panel:

Circular connector 10-pin

Time code input:

XLR (1)

Time code output:

XLR (1)

Ethernet I/F (requires optional BKMW-E3000 board):

RJ-45 (1),

1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:

Memory Stick (1), PCMCIA (1)

Monitor output L/R:

XLR (2) (channel selectable)

Phones:

JM-60 Stereo phone jack

#### Processor adjustment range

Video level:

±3 dB/-∞ to 3 dB selectable

Chroma level:

±3 dB/-∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±15 μs

System SC phase:

±200 ns

Y/C delay:

±100 ns (Betacam/Betacam SP playback only)

Composite input level:

±3 dB

#### Digital video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

MPEG IMX/Betacam SX: 8 bits/sample

Error correction:

Reed-Solomon code

Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz ±0.5 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less

Analog component input to analog

component output (MPEG IMX

record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less LF non-linearity: 3.0% or less

Analog composite input to analog composite output (MPEG IMX record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 53 dB or more Differential gain:

2% or less Differential phase: 2° or less

Y/C delay: 20 ns or less K-factor (2T pulse): 1% or less

#### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

MPEG IMX: 16 or 24 bits/sample

(selectable)

Betacam SX: 16 bits/sample

Analog input to analog output (MPEG IMX record/playback):

A/D and D/A quantization: 24 bits/sample

Frequency response (0 dB at 1 kHz): 20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):

More than 90 dB (16 bits mode), More than

95 dB (24bits mode)

Distortion (at 1 kHz, emphasis ON,

reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two

channels): Less than -80 dB

Wow and flutter: Below measurable level

Head room:

20 dB (18 dB selectable)

Emphasis (ON/OFF selectable in REC mode):

T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

### MSW-2000 MPEG IMX Recorder

#### Features

- Superb picture quality and high sound quality of MPEG IMX format
- 8-bit 4:2:2 component digital recording
- MPEG-2 4:2:2P@ML compression at 50 Mb/s
- Legacy playback of MPEG IMX and Betacam SX formats
- Equipped with IP-network interface to allow audio and video materials to be sent and received across a standard network (option:\*1)
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option:\*2)
- SDTI-CP (Serial Data Transport Interface-Content Packages) output allows interface with other SDTI-CP equipped devices such as servers, non-linear editors
- Data transfer at up to twice normal speed (option:\*3)
- Frame-accurate insert/assemble editing
- Pre-read editing capability
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed playback
- High speed color picture search
- Dynamic Motion Control (DMC)
- Long recording and playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Versatile interfaces; analog composite I/O, analog component I/O, SDI I/O, SDTI-CP I/O, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), and audio monitor (2-ch)
- UMID handling
- Shot mark handling
- Built-in Tele-File reader/writer module to read and write information onto and from a cassette with an optional Tele-File label attached
- Optional remote control panel BKMW-101

(\*1) requires optional BKMW-E3000 Network Interface Board (\*2) requires optional BKMW-104 HD Upconverter Board (\*3) requires a DPR-208 board (service part)

#### Supplied Accessories

PSW 4x16 rack mount screws (4)  
Operation manual (1)  
Installation manual (1)

#### Optional Accessories

BKMW-101 Remote Control Panel  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
BKMW-104 HD Up-converter Board  
BKMW-105 High Speed Feed Board  
BKMW-E3000 Network Interface Board (option for e-VTR)  
RCC-G Cables 9-pin/9-pin Cable  
RMM-131 Rack Mount Kit  
MLB-1M-100 Tele-File Memory Label  
JZ-1 Videocassette logging software  
BCT-MX tapes BCT-MX Series MPEG IMX Tapes



## MPEG IMX VTRs

### Specifications

#### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

2A (200 W) / AC 240 V

Operating temperature:

+5 to +40 °C (+41 to +104 ° F)

Storage temperature:

-20 to +60 °C (-4 to +140 ° F)

Humidity:

20 to 90% (relative humidity)

Mass:

23.0 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:

64.467 (525)/53.776 (625) mm/s

Betacam SX:

59.515 (525)/59.575 (625) mm/s

Recording/playback time:

Max. 184 (525)/220 (625) min with

BCT-184MXL cassette

Fast forward/rewind time:

Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:

±78 times normal playback speed

Betacam SX:

±78 times normal playback speed

Servo lock time:

0.5 (525)/0.7 (625) s or less (from standby on)

Load/unload time:

6 s or less

#### Input/output signals

Analog composite input:

BNC (2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:

BNC (3, including one character out), 1.0 Vp-p, 75 Ω, sync negative

Analog component input:

BNC (x 3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

Analog component output:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

SDI input:

BNC (2, including one active through out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDI output:

BNC (3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP input:

BNC (1), SMPTE 326M (SDTI-CP)

SDTI-CP output:

BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI output (requires optional BKMW-104 board):

BNC (x3)

Analog audio input:

XLR (4) (4CH: channel selectable)

Analog audio output:

XLR (4) (4CH: channel selectable)

Digital audio input (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), default 48 kHz (32 to 48 kHz with sample rate converter), complies with AES-3id-1995

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), 48 kHz fixed, Complies with AES-3id-1995

Remote control

Remote (RS-422A):

D-sub 9-pin (2), Sony 9-pin remote interface

RS-232C (ISR\*):

D-sub 9-pin (1), RS-232C interface

Parallel remote:

D-sub 50-pin (1)

Video control (1):

D-sub 15-pin (1)

Control panel:

Circular connector 10-pin

Time code input:

XLR (1)

Time code output:

XLR (1)

Ethernet I/F (requires optional BKMW-E3000 board):

RJ-45 (1),

1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:

Memory Stick (1), PCMCIA (1)

Monitor output L/R:

XLR (2) (channel selectable)

Phones:

JM-60 Stereo phone jack

#### Processor adjustment range

Video level:

±3 dB/-∞ to 3 dB selectable

Chroma level:

±3 dB/-∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±15 μs

System SC phase:

±200 ns

Composite input level:

±3 dB

#### Digital video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

MPEG IMX/Betacam SX: 8 bits/sample

Error correction:

Reed-Solomon code

Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz ±0.5 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less

Analog component input to analog

component output (MPEG IMX

record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less LF non-linearity: 3.0% or less

Analog composite input to analog composite

output (MPEG IMX record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 53 dB or more Differential gain:

2% or less Differential phase: 2° or less

Y/C delay: 20 ns or less K-factor (2T

pulse): 1% or less

### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

MPEG IMX: 16 or 24 bits/sample (selectable)

Betacam SX: 16 bits/sample

Analog input to analog output (MPEG IMX record/playback):

A/D and D/A quantization: 24 bits/sample

Frequency response (0 dB at 1kHz): 20 Hz to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):

More than 90 dB (16 bits mode), More than 95 dB (24bits mode)

Distortion (at 1 kHz, emphasis ON,

reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two

channels): Less than -80 dB

Wow and flutter: Below measurable level

Head room:

20 dB (18 dB selectable)

Emphasis (ON/OFF selectable in REC mode):

T1=50 μs, T2=15 μs

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

### MSW-M2100 MPEG IMX Player (/1 model)

#### Features

- Superb picture quality and high sound quality of MPEG IMX format
- Legacy playback capability; MPEG IMX, Digital Betacam, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface to allow audio and video materials to be sent across a standard network (option:\*1)
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option:\*2)
- SDTI-CP(Serial Data Transport Interface - Content Package) output to allow interface with SDTI-CP equipped devices such as servers, non-linear editors
- Data transfer at up to twice normal speed as standard
- Versatile interfaces; analog composite output, analog component output, SDI output, SDTI-CP output, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), audio monitor (2-ch), RS-422A (Sony 9-pin), RS-232C, and parallel 50-pin
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed playback
- High speed picture search
- Dynamic Motion Control (DMC)
- Long playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Easy setup using "Memory Stick" media
- Shot Mark handling
- UMID handling
- Built-in Tele-File reader/writer to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detect function (\*3)
- Optional remote panel BKMW-101

(\*1) Requires optional BKMW-E3000 Network Interface Board (\*2) Requires optional BKMW-104 HD Upconverter Board (\*3) May require software upgrade. For details, please contact your nearest Sony office.

#### Supplied Accessories

PSW 4x16 rack mount screws (4)  
 Operation manual (1)  
 Installation manual (1)

#### Optional Accessories

BKMW-101 Remote Control Panel  
 BKMW-102 Remote Control Unit  
 BKMW-103 Control Panel Extension Kit  
 BKMW-104 HD Up-converter Board  
 BKMW-E3000 Network Interface Board  
 (option for e-VTR)  
 RCC-G Cables 9-pin/9-pin Cable  
 RMM-131 Rack Mount Kit  
 MLB-1M-100 Tele-File Memory Label  
 JZ-1 Videocassette logging software  
 BCT-MX tapes BCT-MX Series MPEG IMX  
 Tapes  
 MSH "Memory Stick" IC Memory Media



# MPEG IMX VTRs

## Specifications

### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

2A (200 W) / AC 240 V

Operating temperature:

+5 to +40 °C (+41 to +104 ° F)

Storage temperature:

-20 to +60 °C (-4 to +140 ° F)

Humidity:

20 to 90% (relative humidity)

Mass:

23.0 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:

64.467 (525)/53.776 (625) mm/s

Digital Betacam:

96.7 mm/s

Betacam SX:

59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:

118.6 (525)/101.51 (625) mm/s

Playback time:

Max. 184 (525)/220 (625) min with

BCT-184MXL cassette

Fast forward/rewind time:

Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:

±78 times normal playback speed

Digital Betacam:

±50 times normal playback speed

Betacam SX:

±78 times normal playback speed

Betacam/Betacam SP:

±35 (525)/±42 (625) times normal  
playback speed

Servo lock time:

0.5 (525)/0.7 (625) s or less (from standby  
on)

Load/unload time:

6 s or less

### Output signals

Analog composite output:

BNC (3, including one character out), 1.0

Vp-p, 75 Ω, sync negative

Analog component output:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p,  
75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75

Ω

SDI output:

BNC (3, including one character out),

SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP output:

BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI ouptut (requires optional BKMW-104  
board):

BNC (3)

Analog audio input:

XLR (4) (4CH: channel selectable)

Analog audio output:

XLR (4) (4CH: channel selectable)

Cue audio output:

XLR (1, only Digital Betacam playback)

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), 48 kHz fixed, Complies with

AES-3id-1995

Remote control

Remote (RS-422A):

D-sub 9-pin (2), Sony 9-pin remote  
interface

RS-232C (ISR\*):

D-sub 9-pin (1), RS-232C interface

Parallel remote:

D-sub 50-pin (1)

Video control (1):

D-sub 15-pin (1)

Control panel:

Circular connector 10-pin

Time code input:

XLR (1)

Time code output:

XLR (1)

Ethernet I/F (requires optional BKMW-E3000  
board):

RJ-45 (1),

1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:

Memory Stick (1), PCMCIA (1)

Monitor output L/R:

XLR (2) (channel selectable)

Phones:

JM-60 Stereo phone jack

### Processor adjustment range

Video level:

±3 dB/-∞ to 3 dB selectable

Chroma level:

±3 dB/-∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±15 μs

System SC phase:

±200 ns

Y/C delay:

±100 ns (Betacam/Betacam SP playback  
only)

### Digital video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

MPEG IMX/Betacam SX: 8 bits/sample

Error correction:

Reed-Solomon code

Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz ±0.5 dB

S/N ratio: 56 dB or more K-factor (2T  
pulse): 1% or less

Analog component input to analog  
component output (MPEG IMX

record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more K-factor (2T  
pulse): 1% or less LF non-linearity: 3.0% or  
less

Analog composite input to analog composite  
output (MPEG IMX record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 53 dB or more Differential gain:

2% or less Differential phase: 2° or less

Y/C delay: 20 ns or less K-factor (2T  
pulse): 1% or less

### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

MPEG IMX: 16 or 24 bits/sample

(selectable)

Betacam SX: 16 bits/sample

Digital Betacam: 20 bits/sample

Analog composite output (Digital Betacam  
playback):

A/D and D/A quantization: 24 bits/sample

Frequency response (0 dB at 1kHz): 20 Hz  
to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):  
More than 95 dB

Distortion (at 1 kHz, emphasis ON,  
reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two  
channels): Less than -80 dB

Wow and flutter: Below measurable level

Head room:

20 dB (18 dB selectable)

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

### MSW-M2100P MPEG IMX Player (/1 model)

#### Features

- Superb picture quality and high sound quality of MPEG IMX format
- Legacy playback capability; MPEG IMX, Digital Betacam, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface to allow audio and video materials to be sent across a standard network (option:\*1)
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option:\*2)
- SDTI-CP(Serial Data Transport Interface - Content Package) output to allow interface with SDTI-CP equipped devices such as servers, non-linear editors
- Data transfer at up to twice normal speed as standard
- Versatile interfaces; analog composite output, analog component output, SDI output, SDTI-CP output, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), audio monitor (2-ch), RS-422A (Sony 9-pin), RS-232C, and parallel 50-pin
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed playback
- High speed picture search
- Dynamic Motion Control (DMC)
- Long playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Easy setup using "Memory Stick" media
- Shot Mark handling
- Built-in Tele-File reader/writer to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detection function(\*3)
- Optional remote panel BKMW-101

(\*1) Requires optional BKMW-E3000 Network Interface Board (\*2) Requires optional BKMW-104 HD Upconverter Board (\*3) May require software upgrade. For details, please contact your nearest Sony office.

#### Supplied Accessories

PSW 4x16 rack mount screws (4)  
Operation manual (1)  
Installation manual (1)

#### Optional Accessories

BKMW-101 Remote Control Panel  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
BKMW-104 HD Up-converter Board  
BKMW-E3000 Network Interface Board  
(option for e-VTR)  
RCC-G Cables 9-pin/9-pin Cable  
RMM-131 Rack Mount Kit  
MLB-1M-100 Tele-File Memory Label  
JZ-1 Videocassette logging software  
BCT-MX tapes BCT-MX Series MPEG IMX  
Tapes  
MSH "Memory Stick" IC Memory Media



## MPEG IMX VTRs

### Specifications

#### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

2A (200 W) / AC 240 V

Operating temperature:

+5 to +40 °C (+41 to +104 ° F)

Storage temperature:

-20 to +60 °C (-4 to +140 ° F)

Humidity:

20 to 90% (relative humidity)

Mass:

23.0 kg (50 lb 11 oz)

Dimensions:

427 (W) x 174 (H) x 544 (D) mm

(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:

64.467 (525)/53.776 (625) mm/s

Digital Betacam:

96.7 mm/s

Betacam SX:

59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:

118.6 (525)/101.51 (625) mm/s

Playback time:

Max. 184 (525)/220 (625) min with

BCT-184MXL cassette

Fast forward/rewind time:

Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:

±78 times normal playback speed

Digital Betacam:

±50 times normal playback speed

Betacam SX:

±78 times normal playback speed

Betacam/Betacam SP:

±35 (525)/±42 (625) times normal  
playback speed

Servo lock time:

0.5 (525)/0.7 (625) s or less (from standby  
on)

Load/unload time:

6 s or less

#### Output signals

Analog composite output:

BNC (3, including one character out), 1.0

Vp-p, 75 Ω, sync negative

Analog component output:

BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p,

75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  
Ω

SDI output:

BNC (3, including one character out),

SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP output:

BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI output (requires optional BKMW-104

board):

BNC (3)

Analog audio input:

XLR (4) (4CH: channel selectable)

Analog audio output:

XLR (4) (4CH: channel selectable)

Cue audio output:

XLR (1, only Digital Betacam playback)

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),

AES/EBU:

BNC (4), 48 kHz fixed, Complies with

AES-3id-1995

Remote control

Remote (RS-422A):

D-sub 9-pin (2), Sony 9-pin remote  
interface

RS-232C (ISR\*):

D-sub 9-pin (1), RS-232C interface

Parallel remote:

D-sub 50-pin (1)

Video control (1):

D-sub 15-pin (1)

Control panel:

Circular connector 10-pin

Time code input:

XLR (1)

Time code output:

XLR (1)

Ethernet I/F (requires optional BKMW-E3000  
board):

RJ-45 (1),

1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:

Memory Stick (1), PCMCIA (1)

Monitor output L/R:

XLR (2) (channel selectable)

Phones:

JM-60 Stereo phone jack

#### Processor adjustment range

Video level:

±3 dB/-∞ to 3 dB selectable

Chroma level:

±3 dB/-∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30°

System sync phase:

±15 μs

System SC phase:

±200 ns

Y/C delay:

±100 ns (Betacam/Betacam SP playback  
only)

#### Digital video performance

Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:

MPEG IMX/BETACAM SX: 8 bits/sample,

Digital BETACAM: 10 bits/sample

Error correction:

Reed-Solomon code

Digital input to analog component output:

D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz ±0.5 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less

Analog component input to analog

component output (MPEG IMX

record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,

R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB

S/N ratio: 56 dB or more K-factor (2T

pulse): 1% or less LF non-linearity: 3.0% or  
less

Analog composite input to analog composite

output (MPEG IMX record/playback):

A/D and D/A quantization: 10 bits/sample

Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB

S/N ratio: 53 dB or more Differential gain:

2% or less Differential phase: 2° or less

Y/C delay: 20 ns or less K-factor (2T

pulse): 1% or less

### Digital audio performance

Sampling frequency:

48 kHz (synchronized with video)

Quantization:

MPEG IMX: 16 or 24 bits/sample  
(selectable)

Betacam SX: 16 bits/sample

Digital Betacam: 20 bits/sample

Analog composite output (Digital Betacam

playback):

A/D and D/A quantization: 24 bits/sample

Frequency response (0 dB at 1 kHz): 20 Hz

to 20 kHz +0.5/-1.0 dB

Dynamic range (at 1 kHz, emphasis ON):

More than 95 dB

Distortion (at 1 kHz, emphasis ON,

reference level): Less than 0.05%

Cross talk (at 1 kHz, between any two

channels): Less than -80 dB

Wow and flutter: Below measurable level

Head room:

20 dB (18 dB selectable)

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

# MSW-M2100E MPEG IMX Player (with Network Interface Board installed)

### Features

- Superb picture quality and high sound quality of MPEG IMX format
- Legacy playback capability; MPEG IMX, Digital Betacam, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface as standard to allow audio and video materials to be sent across a standard network
- SDTI-CP(Serial Data Transport Interface - Content Package) output to allow interface with SDTI-CP equipped devices such as servers, nonlinear editors
- Data transfer at up to twice normal speed as standard
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option: \*1)
- Versatile interfaces; analog composite output, analog component output, SDI output, SDTI-CP output, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), audio monitor (2-ch), RS-422A (Sony 9-pin), RS-232C, and parallel 50-pin
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed control
- High speed color picture search
- Dynamic Motion Control (DMC)
- Long playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Easy setup using "Memory Stick" media
- Shot Mark handling
- UMID handling
- Built-in Tele-File reader/writer to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detect function (\*2)
- Optional remote panel BKMW-101

(\*1) Requires optional BKMW-104 HD Upconverter Board (\*2) May require software upgrade. For details, please contact your nearest Sony office.

### Supplied Accessories

- PSW 4x16 rack mount screws (4)
- Operation manual (1)
- Installation manual (1)

### Optional Accessories

- BKMW-101 Remote Control Panel
- BKMW-102 Remote Control Unit
- BKMW-103 Control Panel Extension Kit
- BKMW-104 HD Up-converter Board
- RCC-G Cables 9-pin/9-pin Cable
- RMM-131 Rack Mount Kit
- MLB-1M-100 Tele-File Memory Label
- BCT-MX tapes BCT-MX Series MPEG IMX Tapes
- MSH "Memory Stick" IC Memory Media



This photo shows the MSW-E2000 recorder.



# MPEG IMX VTRs

## Specifications

### General

Power requirements:  
AC 100 to 240 V, 50/60 Hz

Power consumption:  
2A (200 W) / AC 240 V

Operating temperature:  
+5 to +40 °C (+41 to +104 ° F)

Storage temperature:  
-20 to +60 °C (-4 to +140 ° F)

Humidity:  
20 to 90% (relative humidity)

Mass:  
23.0 kg (50 lb 11 oz)

Dimensions:  
427 (W) x 174 (H) x 544 (D) mm  
(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:  
64.467 (525)/53.776 (625) mm/s

Digital Betacam:  
96.7 mm/s

Betacam SX:  
59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:  
118.6 (525)/101.51 (625) mm/s

Playback time:  
Max. 184 (525)/220 (625) min with  
BCT-184MXL cassette

Fast forward/rewind time:  
Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:  
±78 times normal playback speed

Digital Betacam:  
±50 times normal playback speed

Betacam SX:  
±78 times normal playback speed

Betacam/Betacam SP:  
±35 (525)/±42 (625) times normal  
playback speed

Servo lock time:  
0.5 (525)/0.7 (625) s or less (from standby  
on)

Load/unload time:  
6 s or less

**Output signals**

Analog composite output:  
BNC (3, including one character out), 1.0  
Vp-p, 75 Ω, sync negative

Analog component output:  
BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p,  
75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  
Ω

SDI output:  
BNC (3, including one character out),  
SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP output:  
BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI outptut (requires optional BKMW-104  
board):  
BNC (3)

Analog audio input:  
XLR (4) (4CH: channel selectable)

Analog audio output:  
XLR (4) (4CH: channel selectable)

Cue audio output:  
XLR (1, only Digital Betacam playback)

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),  
AES/EBU:  
BNC (4), 48 kHz fixed, Complies with  
AES-3id-1995

Remote control

Remote (RS-422A):  
D-sub 9-pin (2), Sony 9-pin remote  
interface

RS-232C (ISR\*):  
D-sub 9-pin (1), RS-232C interface

Parallel remote:  
D-sub 50-pin (1)

Video control (1):  
D-sub 15-pin (1)

Control panel:  
Circular connector 10-pin

Time code input:  
XLR (1)

Time code output:  
XLR (1)

Ethernet I/F:  
RJ-45 (1),  
1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:  
Memory Stick (1), PCMCIA (1)

Monitor output L/R:  
XLR (2) (channel selectable)

Phones:  
JM-60 Stereo phone jack

**Processor adjustment range**

Video level:  
±3 dB/-∞ to 3 dB selectable

Chroma level:  
±3 dB/-∞ to 3 dB selectable

Set up/black level:  
±30 IRE/±210 mV

Chroma phase/hue:  
±30°

System sync phase:  
±15 μs

System SC phase:  
±200 ns

Y/C delay:  
±100 ns (Betacam/Betacam SP playback  
only)

**Digital video performance**

Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:  
MPEG IMX/Betacam SX: 8 bits/sample

Error correction:  
Reed-Solomon code

Digital input to analog component output:  
D/A quantization: 10 bits/sample  
Bandwidth: 0 to 5.75 MHz ±0.5 dB  
S/N ratio: 56 dB or more K-factor (2T  
pulse): 1% or less

Analog component input to analog  
component output (MPEG IMX  
record/playback):  
A/D and D/A quantization: 10 bits/sample  
Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,  
R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB  
S/N ratio: 56 dB or more K-factor (2T  
pulse): 1% or less LF non-linearity: 3.0% or  
less

Analog composite input to analog composite  
output (MPEG IMX record/playback):  
A/D and D/A quantization: 10 bits/sample  
Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB  
S/N ratio: 53 dB or more Differential gain:  
2% or less Differential phase: 2° or less  
Y/C delay: 20 ns or less K-factor (2T  
pulse): 1% or less

**Digital audio performance**

Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
MPEG IMX: 16 or 24 bits/sample  
(selectable)  
Betacam SX: 16 bits/sample  
Digital Betacam: 20 bits/sample

Analog composite output (Digital Betacam  
playback):  
A/D and D/A quantization: 24 bits/sample  
Frequency response (0 dB at 1kHz): 20 Hz  
to 20 kHz +0.5/-1.0 dB  
Dynamic range (at 1 kHz, emphasis ON):  
More than 95 dB  
Distortion (at 1 kHz, emphasis ON,  
reference level): Less than 0.05%  
Cross talk (at 1 kHz, between any two  
channels): Less than -80 dB  
Wow and flutter: Below measurable level

Head room:  
20 dB (18 dB selectable)

\*ISR: Interactive Status Reporting

## MPEG IMX VTRs

# MSW-M2100EP MPEG IMX Player (with Network Interface Board installed)

### Features

- Superb picture quality and high sound quality of MPEG IMX format
- Legacy playback capability; MPEG IMX, Digital Betacam, Betacam SX, Betacam SP and Betacam formats
- Equipped with IP-network interface as standard to allow audio and video materials to be sent across a standard network
- HD upconversion output capability (1080/59.94i, 1080/50i and 720/59.94p)(option: \*1)
- SDTI-CP(Serial Data Transport Interface - Content Package) output to allow interface with SDTI-CP equipped devices such as servers, nonlinear editors
- Data transfer at up to twice normal speed as standard
- Versatile interfaces; analog composite output, analog component output, SDI output, SDTI-CP output, analog audio (4-ch), AES/EBU digital audio (16 bit-8ch/24 bit-4ch), audio monitor (2-ch), RS-422A (Sony 9-pin), RS-232C, and parallel 50-pin
- Eight channels of 16-bit digital audio or four channels of 24-bit digital audio
- 525/625 switchable operation
- Variable speed control
- High speed color picture search
- Dynamic Motion Control (DMC)
- Long playback time of up to 184 minutes on L-cassette, 60 minutes on S-cassette
- Compact 4U-height design
- Easy setup using "Memory Stick" media
- Shot Mark handling
- UMID handling
- Built-in Tele-File reader/writer to read and write information onto and from a cassette with an optional Tele-File label attached
- Automatic scene change detect function (\*2)
- Optional remote panel BKMW-101

(\*1) Requires optional BKMW-104 HD Upconverter Board (\*2) May require software upgrade. For details, please contact your nearest Sony office.

### Supplied Accessories

PSW 4x16 rack mount screws (4)  
Operation manual (1)  
Installation manual (1)

### Optional Accessories

BKMW-101 Remote Control Panel  
BKMW-102 Remote Control Unit  
BKMW-103 Control Panel Extension Kit  
BKMW-104 HD Up-converter Board  
RCC-G Cables 9-pin/9-pin Cable  
RMM-131 Rack Mount Kit  
MLB-1M-100 Tele-File Memory Label  
BCT-MX tapes BCT-MX Series MPEG IMX Tapes  
MSH "Memory Stick" IC Memory Media



This photo shows the MSW-E2000 recorder.



# MPEG IMX VTRs

## Specifications

### General

Power requirements:  
AC 100 to 240 V, 50/60 Hz

Power consumption:  
2A (200 W) / AC 240 V

Operating temperature:  
+5 to +40 °C (+41 to +104 ° F)

Storage temperature:  
-20 to +60 °C (-4 to +140 ° F)

Humidity:  
20 to 90% (relative humidity)

Mass:  
23.0 kg (50 lb 11 oz)

Dimensions:  
427 (W) x 174 (H) x 544 (D) mm  
(16 7/8 x 6 7/8 x 21 1/2 inches)

Tape speed

MPEG IMX:  
64.467 (525)/53.776 (625) mm/s

Digital Betacam:  
96.7 mm/s

Betacam SX:  
59.515 (525)/59.575 (625) mm/s

Betacam/Betacam SP:  
118.6 (525)/101.51 (625) mm/s

Playback time:  
Max. 184 (525)/220 (625) min with  
BCT-184MXL cassette

Fast forward/rewind time:  
Approx. 3.5 min with BCT-184MXL cassette

Search speed range

MPEG IMX:  
±78 times normal playback speed

Digital Betacam:  
±50 times normal playback speed

Betacam SX:  
±78 times normal playback speed

Betacam/Betacam SP:  
±35 (525)/±42 (625) times normal  
playback speed

Servo lock time:  
0.5 (525)/0.7 (625) s or less (from standby  
on)

Load/unload time:  
6 s or less

**Output signals**

Analog composite output:  
BNC (3, including one character out), 1.0  
Vp-p, 75 Ω, sync negative

Analog component output:  
BNC (3, for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p,  
75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75  
Ω

SDI output:  
BNC (3, including one character out),  
SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

SDTI-CP output:  
BNC (2), SMPTE 326M (SDTI-CP)

HD-SDI output (requires optional BKMW-104  
board):  
BNC (3)

Analog audio input:  
XLR (4) (4CH: channel selectable)

Analog audio output:  
XLR (4) (4CH: channel selectable)

Cue audio output:  
XLR (1, only Digital Betacam playback)

Digital audio output (CH 1/2, 3/4, 5/6, 7/8),  
AES/EBU:  
BNC (4), 48 kHz fixed, Complies with  
AES-3id-1995

Remote control

Remote (RS-422A):  
D-sub 9-pin (2), Sony 9-pin remote  
interface

RS-232C (ISR\*):  
D-sub 9-pin (1), RS-232C interface

Parallel remote:  
D-sub 50-pin (1)

Video control (1):  
D-sub 15-pin (1)

Control panel:  
Circular connector 10-pin

Time code input:  
XLR (1)

Time code output:  
XLR (1)

Ethernet I/F:  
RJ-45 (1),  
1000Base-T/100Base-TX/10Base-T

Memory card insertion slot:  
PCMCIA (1)

Monitor output L/R:  
XLR (2) (channel selectable)

Phones:  
JM-60 Stereo phone jack

**Processor adjustment range**

Video level:  
±3 dB/-∞ to 3 dB selectable

Chroma level:  
±3 dB/-∞ to 3 dB selectable

Set up/black level:  
±30 IRE/±210 mV

Chroma phase/hue:  
±30°

System sync phase:  
±15 μs

System SC phase:  
±200 ns

Y/C delay:  
±100 ns (Betacam/Betacam SP playback  
only)

**Digital video performance**

Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:  
MPEG IMX/Betacam SX: 8 bits/sample

Error correction:  
Reed-Solomon code

Digital input to analog component output:  
D/A quantization: 10 bits/sample  
Bandwidth: 0 to 5.75 MHz ±0.5 dB  
S/N ratio: 56 dB or more K-factor (2T  
pulse): 1% or less

Analog component input to analog  
component output (MPEG IMX  
record/playback):  
A/D and D/A quantization: 10 bits/sample  
Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB,  
R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB  
S/N ratio: 56 dB or more K-factor (2T  
pulse): 1% or less LF non-linearity: 3.0% or  
less

Analog composite input to analog composite  
output (MPEG IMX record/playback):  
A/D and D/A quantization: 10 bits/sample  
Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB  
S/N ratio: 53 dB or more Differential gain:  
2% or less Differential phase: 2° or less  
Y/C delay: 20 ns or less K-factor (2T  
pulse): 1% or less

**Digital audio performance**

Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
MPEG IMX: 16 or 24 bits/sample  
(selectable)  
Betacam SX: 16 bits/sample  
Digital Betacam: 20 bits/sample

Analog composite output (Digital Betacam  
playback):  
A/D and D/A quantization: 24 bits/sample  
Frequency response (0 dB at 1kHz): 20 Hz  
to 20 kHz +0.5/-1.0 dB  
Dynamic range (at 1 kHz, emphasis ON):  
More than 95 dB  
Distortion (at 1 kHz, emphasis ON,  
reference level): Less than 0.05%  
Cross talk (at 1 kHz, between any two  
channels): Less than -80 dB  
Wow and flutter: Below measurable level

Head room:  
20 dB (18 dB selectable)

\*ISR: Interactive Status Reporting

MPEG IMX VTRs



MPEG IMX VTRs

Betacam SX VTRs

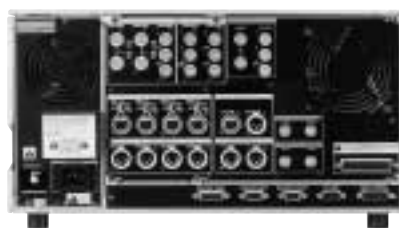
DNW-A75 ..... 352  
DNW-A75P ..... 354  
DNW-A65 ..... 356  
DNW-A65P ..... 357  
DNW-A28 ..... 358  
DNW-A28P ..... 360  
DNW-A25WS..... 362  
DNW-A25WSP ..... 364

## Betacam SX VTRs

### DNW-A75 Betacam SX Recorder

#### Features

- Superb picture quality and high sound quality of Betacam SX format
- Component digital recording using the advanced compression algorithm of MPEG-2 4:2:2P@ML
- ±0 frame insert/assemble editing
- Pre-read editing capability
- Variable speed control
- DMC (Dynamic Motion Control)
- Speed search with VTR: ±78 times normal playback speed
- Shot mark handling
- Four channels of 16-bit/48 kHz digital audio
- Betacam/Betacam SP playback compatibility
- Provides long recording time of up to 62 minutes on a single S-cassette tape, 194 minutes on a L-cassette
- Current Betacam SP metal tape cassettes can be used for Betacam SX recording (with Betacam SX, recording time is double the stated duration of the Betacam SP tape)
- 525/60, 625/50 switchable in a digital component environment
- Versatile interfaces; SDI input/output, analog composite input, analog component input, three analog composite outputs, one analog component output, analog 4-ch audio input/output, AES/EBU digital audio input/output, RS-422A 9-pin remote control interface and RS-232C remote control interface
- Optional interface; SDTI-CP output (requires the optional BKNW-124 board)



#### Supplied Accessories

PSW 4 x 16 screws for rack mounting (4)  
 Maintenance manual (1)  
 Operation manual (1)

#### Optional Accessories

BKNW-118 SDTI (SX) Output Board  
 BKNW-119 Control Panel  
 BKNW-121 Control Panel Case  
 BKNW-122 Control Panel Extension Kit  
 BKNW-124 SDTI-CP Output Board  
 RMM-111 Rack Mount Kit  
 RCC-G Cables 9-pin/9-pin Cable  
 BCT-SXA tapes Betacam SX Tapes

Betacam SX VTRs

Specifications

General

Power requirements:  
AC 100 V to 240 V, 50/60 Hz

Power consumption:  
215 VA (205 W)

Operating temperature:  
+5 +40 °C (+41 to +104 °F)

Storage temperature:  
-20 to +60 °C (-4 to +140 °F)

Humidity:  
25 to 80% (relative humidity)

Mass:  
28.5 kg (62 lb 13 oz)

Dimensions:  
427 (W) x 237 (H) x 524 (D) mm  
(16 7/8 x 9 3/8 x 20 3/4 inches)

Tape speed  
Betacam SX:  
59.515 mm/s  
Betacam/Betacam SP:  
118.6 mm/s

Digital playback/recording time:  
Max. 194 min (with BCT-194SXL A cassette)

Fast forward/rewind time:  
Approx. 3 min (with BCT-194SXL A cassette)

Search speed range:  
±78 times normal playback speed (Betacam SX)  
±35 times normal playback speed (Betacam/Betacam SP)

Servo lock time:  
0.5 s or less (from standby on)

Load/unload time:  
6 s or less

**Input/output signal**

Analog composite input:  
BNC (2), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:  
BNC (3) (including one character out), 1.0 Vp-p, 75 Ω, sync negative

Analog component input:  
BNC (3) (for 1 set, Y/R-Y/B-Y), Y:1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

Analog component output:  
BNC (3) (for 1 set, Y/R-Y/B-Y), Y:1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

SDI input:  
BNC (2) (including one active through out), SMPTE259M, 270 Mb/s

SDI output:  
BNC (3) (including one character out), SMPTE259M, 270 Mb/s

SDTI (SX) output (requires optional BKNW-118 board):  
BNC (2), SMPTE 305M

SDTI-CP output (requires optional BKNW-124 board):  
BNC (2), SMPTE 326M

Analog audio input (CH1, 2, 3, 4):  
XLR (4)

Analog audio output (CH1, 2, 3, 4):  
XLR (4)

Digital audio input (CH1/2, 3/4):  
BNC (2), AES/EBU

Digital audio output (CH1/2, 3/4):  
BNC (2), AES/EBU

Remote control  
Remote:  
D-sub 9-pin (2), Sony 9-pin remote interface

RS-232C:  
D-sub 9-pin (1), RS-232C interface

Processor control:  
D-sub 15-pin (1)

Connector for control panel:  
Mini D-sub 29-pin (1)

Parallel remote:  
50-pin (1)

Reference input:  
BNC (1), 0.3 Vp-p, 75 Ω, sync negative (with loop through out)

Time code input:  
XLR (1)

Time code output:  
XLR (1)

Monitor output L/R:  
XLR (2)

**Processor adjustment range**

Video level:  
±3 dB/ -∞ to 3 dB selectable

Chroma level:  
±3 dB/ -∞ to 3 dB selectable

Set up/black level:  
±30 IRE/±210 mV

Chroma phase/hue:  
±30 °

System sync phase:  
±15 μs

System SC phase:  
±200 ns

Y/C delay:  
±100 ns (Betacam/Betacam SP playback only)

Composite input level:  
±3 dB

**Digital video performance**

Sampling frequency:  
Y: 13.5 MHz  
R-Y/B-Y: 6.75 MHz

Quantization:  
8 bits/sample

Error correction:  
Reed-solomon code

Digital input to analog component output:  
K-factor (2T pulse): 1% or less

Analog component input (option) to analog component output  
Input A/D quantization:  
8 bits/sample  
K-factor (2T pulse):  
1% or less  
LF non-linearity:  
3.0% or less

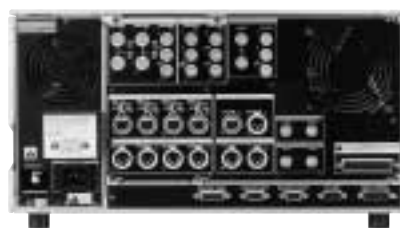
Analog composite input (option) to analog composite output  
Differential gain:  
2% or less  
Differential phase:  
2° or less  
Y/C delay:  
20 ns or less  
K-factor (2T pulse):  
1% or less

## Betacam SX VTRs

### DNW-A75P Betacam SX Recorder

#### Features

- Superb picture quality and high sound quality of Betacam SX format
- Component digital recording using the advanced compression algorithm of MPEG-2 4:2:2P@ML
- ±0 frame insert/assemble editing
- Pre-read editing capability
- Variable speed control
- DMC (Dynamic Motion Control)
- Speed search with VTR: ±78 times normal playback speed
- Shot mark handling
- Four channels of 16-bit/48 kHz digital audio
- Betacam/Betacam SP playback compatibility
- Provides long recording time of up to 62 minutes on a single S-cassette tape, 194 minutes on a L-cassette
- Current Betacam SP metal tape cassettes can be used for Betacam SX recording (with Betacam SX, recording time is double the stated duration of the Betacam SP tape)
- 525/60, 625/50 switchable in a digital component environment
- Versatile interfaces; SDI input/output, analog composite input, analog component input, three analog composite outputs, one analog component output, analog 4-ch audio input/output, AES/EBU digital audio input/output, RS-422A 9-pin remote control interface and RS-232C remote control interface
- Optional interface; SDTI-CP output (requires the optional BKNW-124 board)



#### Supplied Accessories

PSW 4 x 16 screws for rack mounting (4)  
 Maintenance manual (1)  
 Operation manual (1)

#### Optional Accessories

BKNW-118 SDTI (SX) Output Board  
 BKNW-119 Control Panel  
 BKNW-121 Control Panel Case  
 BKNW-122 Control Panel Extension Kit  
 BKNW-124 SDTI-CP Output Board  
 RMM-111 Rack Mount Kit  
 RCC-G Cables 9-pin/9-pin Cable  
 BCT-SXA tapes Betacam SX Tapes

Betacam SX VTRs

Specifications

General

Power requirements:

AC 100 V to 240 V, 50/60 Hz

Power consumption:

215 VA (205 W)

Operating temperature:

+5 +40 °C (+41 to +104 °F)

Storage temperature:

-20 to +60 °C (-4 to +140 °F)

Humidity:

25 to 80% (relative humidity)

Mass:

28.5 kg (62 lb 13 oz)

Dimensions:

427 (W) x 237 (H) x 524 (D) mm

(16 7/8 x 9 3/8 x 20 3/4 inches)

Tape speed

Betacam SX:

59.575 mm/s

Betacam/Betacam SP:

101.5 mm/s

Digital playback/recording time:

Max. 194 min (with BCT-194SXL A cassette)

Fast forward/rewind time:

Approx. 3 min (with BCT-194SXL A cassette)

Search speed range:

±78 times normal playback speed (Betacam SX)

±35 times normal playback speed (Betacam/Betacam SP)

Servo lock time:

0.5 s or less (from standby on)

Load/unload time:

6 s or less

Input/output signal

Analog composite input:

BNC (2), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:

BNC (3) (including one character out), 1.0 Vp-p, 75 Ω, sync negative

Analog component input:

BNC (3) (for 1 set, Y/R-Y/B-Y), Y:1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

Analog component output:

BNC (3) (for 1 set, Y/R-Y/B-Y), Y:1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω

SDI input:

BNC (2) (including one active through out), ITU-R BT656-3, 270 Mb/s

SDI output:

BNC (3) (including one character out), ITU-R BT656-3, 270 Mb/s

SDTI (SX) output (requires optional

BKNW-118 board):

BNC (2), SMPTE 305M

SDTI-CP output (requires optional BKNW-124 board):

BNC (2), SMPTE 326M

Analog audio input (CH1, 2, 3, 4):

XLR (4)

Analog audio output (CH1, 2, 3, 4):

XLR (4)

Digital audio input (CH1/2, 3/4):

BNC (2), AES/EBU

Digital audio output (CH1/2, 3/4):

BNC (2), AES/EBU

Remote control

Remote:

D-sub 9-pin (2), Sony 9-pin remote interface

RS-232C:

D-sub 9-pin (1), RS-232C interface

Processor control:

D-sub 15-pin (1)

Connector for control panel:

Mini D-sub 29-pin (1)

Parallel remote:

50-pin (1)

Reference input:

BNC (1), 0.3 Vp-p, 75 Ω, sync negative (with loop through out)

Time code input:

XLR (1)

Time code output:

XLR (1)

Monitor output L/R:

XLR (2)

Processor adjustment range

Video level:

±3 dB/ -∞ to 3 dB selectable

Chroma level:

±3 dB/ -∞ to 3 dB selectable

Set up/black level:

±30 IRE/±210 mV

Chroma phase/hue:

±30 °

System sync phase:

±15 μs

System SC phase:

±200 ns

Y/C delay:

±100 ns (Betacam/Betacam SP playback only)

Composite input level:

±3 dB

Digital video performance

Sampling frequency:

Y: 13.5 MHz

R-Y/B-Y: 6.75 MHz

Quantization:

8 bits/sample

Error correction:

Reed-solomon code

Digital input to analog component output:

K-factor (2T pulse): 1% or less

Analog component input (option) to analog component output

Input A/D quantization:

8 bits/sample

K-factor (2T pulse):

1% or less

LF non-linearity:

3.0% or less

Analog composite input (option) to analog composite output

Differential gain:

2% or less

Differential phase:

2° or less

Y/C delay:

20 ns or less

K-factor (2T pulse):

1% or less

## Betacam SX VTRs

# DNW-A65 Betacam SX Player

### Features

- Superb picture quality and high sound quality of Betacam SX format
- Betacam/Betacam SP playback capability
- Variable speed control from -1 to +2 times with noiseless image and digital jog sound (Betacam SX playback only)
- DMC (Dynamic Motion Control)
- Shot mark, REC start mark and virtual shot mark handling
- Versatile interfaces; analog composite and component video outputs, component SDI output and four channels of analog audio outputs, AES/EBU output, two audio monitor outputs, RS-422A control, RS-232C control, parallel 50-pin remote control interface, video processor control interface (Parallel 15-pin), and time code output
- Optional interface; SDTI-CP output (requires the optional BKNW-124 board)
- Playable in Flexicart and LMS systems
- Shuttle search speed:  $\pm 78$  times normal playback speed in Betacam SX mode,  $\pm 35$  times normal playback speed in Betacam/SP mode
- Provides long playback time of up to 194 minutes using an L cassette and 62 minutes using an S cassette
- Flexible usage of the control panel



### Supplied Accessories

PSW 4 x 16 screws for rack mounting (4)  
Maintenance manual (Part 1) (1)  
Operation manual (1)

### Optional Accessories

BKNW-119 Control Panel  
BKNW-118 SDTI (SX) Output Board  
BKNW-121 Control Panel Case  
BKNW-122 Control Panel Extension Kit  
BKNW-124 SDTI-CP Output Board  
RMM-111 Rack Mount Kit  
RCC-G Cables 9-pin/9-pin Cable  
BCT-SXA tapes Betacam SX Tapes

### Specifications

#### General

Power requirements:  
AC 100 V to 240 V, 50/60 Hz  
Power consumption:  
195 VA (190 W)/AC 240 V  
Operating temperature:  
+5 to +40°C (+41 to +104°F)  
Storage temperature:  
-20 to +60°C (-4 to +140°F)  
Humidity:  
25 to 80% (relative humidity)  
Mass:  
28 kg (61 lb 10 oz)  
Dimensions:  
427 (W) x 237 (H) x 524 (D) mm  
(16 7/8 x 9 3/8 x 20 3/4 inches)  
Tape speed  
Betacam SX:  
59.515 mm/s (525 mode)  
Betacam/Betacam SP:  
118.6 mm/s  
Digital playback time:  
Max. 194 min (with BCT-194SXL cassette)  
Fast forward/rewind time:  
Approx. 3 min (with BCT-194SXL cassette)

### Search speed range:

$\pm 78$  times normal playback speed (Betacam SX)  
 $\pm 35$  times normal playback speed  
(Betacam/Betacam SP)

### Servo lock time:

0.5 s or less (from standby on)

### Load/unload time:

6 s or less

### Output signals

#### Analog composite output:

BNC (3) (including one character out), 1.0 Vp-p,  
75  $\Omega$ , sync negative

#### Analog component output:

BNC (3) (for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75  $\Omega$ ,  
sync negative, R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$

#### SDI output:

BNC (3) (including one character out), SMPTE  
259M, 270 Mb/s

#### SDTI (SX) output (requires optional BKNW-118 board):

BNC (2), SMPTE 305M

#### SDTI-CP output (requires optional BKNW-124 board):

BNC (2), SMPTE 326M

#### Analog audio output (CH 1, 2, 3, 4):

XLR (4)

#### Digital audio output (CH 1/2, 3/4):

BNC (2), AES/EBU

#### Remote control

##### Remote:

D-sub 9-pin (2), Sony 9-pin remote interface

##### RS-232C:

D-sub 9-pin (1), RS-232C interface

##### Processor control:

D-sub 15-pin (1)

##### Connector for control panel:

Mini D-sub 29-pin (1)

##### Parallel remote:

50-pin (1)

#### Time code output:

XLR (1)

#### Monitor output L/R:

XLR (2)

### Processor adjustment range

#### Video level:

$\pm 3$  dB/  $-\infty$  to 3 dB selectable

#### Chroma level:

$\pm 3$  dB/  $-\infty$  to 3 dB selectable

#### Set up/black level:

$\pm 30$  IRE/ $\pm 210$  mV

#### Chroma phase/hue:

$\pm 30^\circ$

#### System sync phase:

$\pm 15$   $\mu$ s

#### System SC phase:

$\pm 200$  ns

#### Y/C delay:

$\pm 100$  ns (Betacam/Betacam SP playback only)

### Digital video performance

#### Sampling frequency

Y: 13.5 MHz

R-Y/B-Y: 6.75 MHz

#### Quantization:

8 bits/sample

#### Error correction:

Reed-Solomon code

### Digital audio performance

#### Sampling frequency:

48 kHz (synchronized with video)

#### Quantization:

16 bits/sample

#### Frequency response (0 dB at 1 kHz):

20 Hz to 20 kHz +0.5 dB/-1.0 dB

#### Dynamic range (at 1 kHz, emphasis ON):

More than 90 dB

#### Distortion (at 1 kHz, emphasis ON, reference level):

Less than 0.05%

#### Cross talk (at 1 kHz, between any two channels):

Less than -80 dB

#### Wow and flutter:

Below measurable level

#### Head room:

20 dB (18 dB selectable)

#### Emphasis (ON/OFF selectable in REC mode):

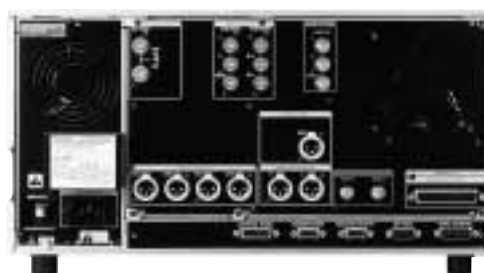
T1=50  $\mu$ s, T2=15  $\mu$ s

## Betacam SX VTRs

# DNW-A65P Betacam SX Player

### Features

- Superb picture quality and high sound quality of Betacam SX format
- Betacam/Betacam SP playback capability
- Variable speed control from -1 to +2 times with noiseless image and digital jog sound (Betacam SX playback only)
- DMC (Dynamic Motion Control)
- Shot mark, REC start mark and virtual shot mark handling
- Versatile interfaces; analog composite and component video outputs, component SDI output and four channels of analog audio outputs, AES/EBU output, two audio monitor outputs, RS-422A control, RS-232C control, parallel 50-pin remote control interface, video processor control interface (Parallel 15-pin), and time code output
- Optional interface; SDTI-CP output (requires the optional BKNW-124 board)
- Playable in Flexicart and LMS systems
- Shuttle search speed:  $\pm 78$  times normal playback speed in Betacam SX mode,  $\pm 42$  times normal playback speed in Betacam/SP mode
- Provides long playback time of up to 194 minutes using an L cassette and 62 minutes using an S cassette
- Flexible usage of the control panel



### Supplied Accessories

PSW 4 x 16 screws for rack mounting (4)  
Maintenance manual (Part 1) (1)  
Operation manual (1)

### Optional Accessories

BKNW-119 Control Panel  
BKNW-118 SDTI (SX) Output Board  
BKNW-121 Control Panel Case  
BKNW-122 Control Panel Extension Kit  
BKNW-124 SDTI-CP Output Board  
RMM-111 Rack Mount Kit  
RCC-G Cables 9-pin/9-pin Cable  
BCT-SXA tapes Betacam SX Tapes

### Specifications

#### General

Power requirements:  
AC 100 V to 240 V, 50/60 Hz  
Power consumption:  
195 VA (190 W)/AC 240 V  
Operating temperature:  
+5 to +40°C (+41 to +104°F)  
Storage temperature:  
-20 to +60°C (-4 to +140°F)  
Humidity:  
25 to 80% (relative humidity)  
Mass:  
28 kg (61 lb 10 oz)  
Dimensions:  
427 (W) x 237 (H) x 524 (D) mm  
(16 7/8 x 9 3/8 x 20 3/4 inches)  
Tape speed  
Betacam SX:  
59.575 mm/s (625 mode)  
Betacam/Betacam SP:  
101.5 mm/s  
Digital playback time:  
Max. 194 min (with BCT-194SXL cassette)  
Fast forward/rewind time:  
Approx. 3 min (with BCT-194SXL cassette)

### Search speed range:

$\pm 78$  times normal playback speed (Betacam SX)  
 $\pm 35$  times normal playback speed  
(Betacam/Betacam SP)

### Servo lock time:

0.5 s or less (from standby on)

### Load/unload time:

6 s or less

### Output signals

#### Analog composite output:

BNC (3) (including one character out), 1.0 Vp-p,  
75  $\Omega$ , sync negative

#### Analog component output:

BNC (3) (for 1 set, Y/R-Y/B-Y), Y: 1.0 Vp-p, 75  $\Omega$ ,  
sync negative, R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$

#### SDI output:

BNC (3) (including one character out), ITU-R  
BT.656-3, 270 Mb/s

#### SDTI (SX) output (requires optional BKNW-118 board):

BNC (2), SMPTE 305M

#### SDTI-CP output (requires optional BKNW-124 board):

BNC (2), SMPTE 326M

#### Analog audio output (CH 1, 2, 3, 4):

XLR (4)

#### Digital audio output (CH 1/2, 3/4):

BNC (2), AES/EBU

#### Remote control

##### Remote:

D-sub 9-pin (2), Sony 9-pin remote interface

##### RS-232C:

D-sub 9-pin (1), RS-232C interface

##### Processor control:

D-sub 15-pin (1)

##### Connector for control panel:

Mini D-sub 29-pin (1)

##### Parallel remote:

50-pin (1)

#### Time code output:

XLR (1)

#### Monitor output L/R:

XLR (2)

### Processor adjustment range

#### Video level:

$\pm 3$  dB/  $-\infty$  to 3 dB selectable

#### Chroma level:

$\pm 3$  dB/  $-\infty$  to 3 dB selectable

#### Set up/black level:

$\pm 30$  IRE/ $\pm 210$  mV

#### Chroma phase/hue:

$\pm 30^\circ$

#### System sync phase:

$\pm 15$   $\mu$ s

#### System SC phase:

$\pm 200$  ns

#### Y/C delay:

$\pm 100$  ns (Betacam/Betacam SP playback only)

### Digital video performance

#### Sampling frequency

Y: 13.5 MHz

R-Y/B-Y: 6.75 MHz

#### Quantization:

8 bits/sample

#### Error correction:

Reed-Solomon code

### Digital audio performance

#### Sampling frequency:

48 kHz (synchronized with video)

#### Quantization:

16 bits/sample

#### Frequency response (0 dB at 1 kHz):

20 Hz to 20 kHz +0.5 dB/-1.0 dB

#### Dynamic range (at 1 kHz, emphasis ON):

More than 90 dB

#### Distortion (at 1 kHz, emphasis ON, reference level):

Less than 0.05%

#### Cross talk (at 1 kHz, between any two channels):

Less than -80 dB

#### Wow and flutter:

Below measurable level

#### Head room:

20 dB (18 dB selectable)

#### Emphasis (ON/OFF selectable in REC mode):

T1=50  $\mu$ s, T2=15  $\mu$ s

## Betacam SX VTRs

### DNW-A28 Betacam SX Recorder

#### Features

- High quality digital video of Betacam SX format using MPEG-2 4:2:2P@ML compression technology, and 16-bit uncompressed audio channels
- Compact design for use in a limited space such as an OB van
- Sliding key panel
- Small jog dial
- Manual editing function
- Shot mark, REC start mark and virtual shot mark handling
- 525/60 or 625/50 versatility
- Betacam/Betacam SP playback capability
- Equipped with analog composite video input/output, component SDI input/output and four channels of digital audio or two channels of analog audio outputs as standard
- RS-422A 9-pin remote control interface
- Shuttle search speed— Betacam SX mode:  $\pm 24$  times normal playback speed, Betacam SP mode:  $\pm 10$  times normal playback speed
- Provides long recording and playback time of 62 minutes using an S cassette

#### Supplied Accessories

Operation manual (1)  
Installation manual (1)

#### Optional Accessories

BKNW-25 DV Interface Unit  
BKP-L551 Li-ion Battery Adaptor  
AC-DN2A AC Adaptor  
AC-550 AC Adaptor  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BVR-3 Remote Controller  
BCT-SXA tapes Betacam SX Tapes



# Betacam SX VTRs

## Specifications

### General

Power requirements:  
DC 12 V +5.0/-1.0 V  
Power consumption:  
58 W  
Operating temperature:  
+0 to +40 °C (+32 to +104 °F)  
Storage temperature:  
-20 to +60 °C (-4 to +140 °F)  
Humidity:  
25 to 80 %  
Mass:  
5.8 kg (12 lb 12 oz)  
Dimensions:  
210 (W) x 132 (H) x 425 (D) mm  
(8 3/8 x 5 1/4 x 18 inches)  
Tape speed  
Betacam SX:  
59.515 mm/s  
Betacam/Betacam SP:  
118.6 mm/s  
Digital playback/recording time:  
Max. 62 min (with BCT-62SXA cassette)  
Rewind time:  
Approx. 3 min (with BCT-62SXA cassette)  
Search speed range:  
Betacam SX:  $\pm 24$  times normal playback speed  
Betacam/Betacam SP:  $\pm 10$  times normal playback speed  
Servo lock time:  
0.5 ns or less (from standby on)  
Load/unload time:  
6 s or less

### Inputs/output signals

Analog composite input:  
BNC (1), 1.0 Vp-p, 75  $\Omega$ , sync negative  
Analog composite output:  
BNC (2; including one character out), 1.0 Vp-p, 75  $\Omega$ , sync negative  
SDI input:  
BNC (1), SMPTE 259M, 270 Mb/s  
SDI output:  
BNC (2), SMPTE 259M, 270 Mb/s  
Analog audio input (CH 1, 2):  
XLR (2)  
Analog audio output (CH 1, 2):  
XLR (2)  
Analog monitor output (L, R):  
XLR (2)  
Headphones output:  
Standard jack (1), stereo  
Remote control:  
D-sub 9-pin (1), Sony 9-pin remote interface  
Reference input:  
BNC (1), 0.3 Vp-p, 75  $\Omega$ , sync negative (with loop through out)  
Test:  
Aux 6-pin (1) for maintenance)  
Time code input:  
BNC (1)  
Time code output:  
BNC (1)

### Processor adjustment range

Video level:  
 $\pm 3$  dB/- $\infty$  to 3 dB selectable  
Chroma level:  
 $\pm 3$  dB/- $\infty$  to 3 dB selectable  
Set up/black level:  
 $\pm 30$  IRE/  $\pm 210$  mV

Y/C delay:  
 $\pm 100$  ns (in Betacam/Betacam SP playback)  
Chroma phase:  
 $\pm 30^\circ$   
System phase:  
Sync:  $\pm 15$   $\mu$ s (SC step), SC:  $\pm 200$  ns  
**Digital video signal system**  
Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz  
Quantization:  
8 bits/sample  
Compression:  
MPEG-2 4:2:2 Profile@Main Level  
**Analog composite recording playback**  
Bandwidth (Y):  
0 to 4.5 MHz +0.5 dB/-3.0 dB  
S/N:  
53 dB or more  
Differential gain:  
2% or less  
Differential phase:  
2° or less  
Y/C delay:  
15 ns or less  
K factor (2T pulse):  
1.5% or less  
Output SCH phase:  
Based upon RS-170A/ITU-R BT.624-3  
**Digital audio signal system**  
Sampling frequency:  
48 kHz (synchronized with video)  
Quantization:  
16 bits/sample  
Headroom:  
20 dB (or 18 dB selectable)  
Emphasis:  
T1=50  $\mu$ s, T2=15  $\mu$ s (on/off selectable in recording mode)  
**Analog output**  
A/D, D/A quantization:  
16 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5 dB/-1.0 dB (0 dB at 1 kHz)  
Dynamic range:  
88 dB or more (at 1 kHz, emphasis on, 30 kHz LPF ON)  
Distortion:  
0.05% or less (at 1 kHz, emphasis on, reference level (+4 dBm), 30 kHz LPF ON)  
Crosstalk:  
-80 dB or less (at 1 kHz, between any two channels, 1kHz BPF ON)  
**Others**  
Channel coding:  
S-I-NRZI PR-IV  
Error correction:  
Reed Solomon code  
Display:  
Counter, servo lock, tape remain, battery remain, etc.  
Audio level meter:  
Ch-1, Ch-2 (indication of Ch-3, 4 is also available by switch)

## Betacam SX VTRs

### DNW-A28P Betacam SX Recorder

#### Features

- High quality digital video of Betacam SX format using MPEG-2 4:2:2P@ML compression technology, and 16-bit uncompressed audio channels
- Compact design for use in a limited space such as an OB van
- Sliding key panel
- Small jog dial
- Manual Editing Function
- Shot mark, REC start mark and virtual shot mark handling
- 525/60 or 625/50 versatility
- Betacam/Betacam SP playback capability
- Equipped with analog composite video input/output, component SDI input/output and four channels of digital audio or two channels of analog audio outputs as standard
- RS-422A 9-pin remote control interface
- Shuttle search speed— Betacam SX mode:  $\pm 24$  times normal playback speed, Betacam SP mode:  $\pm 10$  times normal playback speed
- Provides long recording and playback time of 62 minutes using an S cassette

#### Supplied Accessories

Operation manual (1)  
Installation manual (1)

#### Optional Accessories

BKNW-25 DV Interface Unit  
BKP-L551 Li-ion Battery Adaptor  
AC-DN2A AC Adaptor  
AC-550CE AC Adaptor  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BVR-3 Remote Controller  
BCT-SXA tapes Betacam SX Tapes



# Betacam SX VTRs

## Specifications

### General

Power requirements:  
DC 12 V +5.0 /-1.0 V

Power consumption:  
58 W

Operating temperature:  
+0 to +40 °C (+32 to +104 °F)

Storage temperature:  
-20 to +60 °C (-4 to +140 °F)

Humidity:  
25 to 80%

Mass:  
5.8 kg (12 lb 12 oz)

Dimensions:  
210 (W) x 132 (H) x 425 (D) mm  
(8 3/8 x 5 1/4 x 18 inches)

Tape speed  
Betacam SX:  
59.575 mm/s  
Betacam/Betacam SP:  
101.5 mm/s

Digital playback/recording time:  
Max. 62 min (with BCT-62SXA cassette)

Rewind time:  
Approx. 3 min (with BCT-62SXA cassette)

Search speed range  
Betacam SX:  
±24 times normal playback speed  
Betacam/Betacam SP:  
±10 times normal playback speed

Servo lock time:  
0.5 ns or less (from standby on)

Load/unload time:  
6 s or less

### Inputs/output signals

Analog composite input:  
BNC (1), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:  
BNC (2; including one character out), 1.0 Vp-p, 75 Ω, sync negative

SDI input:  
BNC (1), ITU-R BT.656-3, 270 Mb/s

SDI output  
BNC (2), ITU-R BT.656-3, 270 Mb/s

Analog audio input (CH 1, 2):  
XLR (2)

Analog audio output (CH 1, 2):  
XLR (2)

Analog monitor output (L, R):  
XLR (2)

Headphones output:  
Standard jack (1), stereo

Remote control:  
D-sub 9-pin (1), Sony 9-pin remote interface

Reference input:  
BNC (1), 0.3 Vp-p, 75 Ω, sync negative (with loop through out)

Test:  
AUX 6-pin (1) for maintenance

Time code input:  
BNC (1)

Time code output:  
BNC (1)

### Processor adjustment range

Video level:  
±3 dB/-∞ to 3 dB selectable

Chroma level:  
±3 dB/-∞ to 3 dB selectable

Set up/black level:  
±30 IRE/ ±210 mV

Y/C delay:  
±100 ns (in Betacam/Betacam SP playback)

Chroma phase:  
±30°

System phase:  
Sync: ±15 μs (SC step), SC: ±200 ns

**Digital video signal system**

Sampling frequency:  
Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz

Quantization:  
8 bits/sample

Compression:  
MPEG-2 4:2:2 Profile@Main Level

**Analog composite recording playback**

Bandwidth (Y):  
0 to 4.5 MHz +0.5 dB/-3.0 dB

S/N:  
53 dB or more

Differential gain:  
2% or less

Differential phase:  
2° or less

Y/C delay:  
15 ns or less

K factor (2T pulse):  
1.5% or less

Output SCH phase:  
Based upon RS-170A/ITU-R BT.624-3

**Digital audio signal system**

Sampling frequency:  
48 kHz (synchronized with video)

Quantization:  
16 bits/sample

Headroom:  
20 dB (or 18 dB selectable)

Emphasis:  
T1=50 μs, T2=15 μs (on/off selectable in recording mode)

**Analog output**

A/D, D/A quantization:  
16 bits/sample

Frequency response:  
20 Hz to 20 kHz +0.5 dB/-1.0 dB (0 dB at 1 kHz)

Dynamic range:  
88 dB or more (at 1 kHz, emphasis on, 30 kHz LPF ON)

Distortion:  
0.05% or less (at 1 kHz, emphasis on, reference level (+4 dBm), 30 kHz LPF ON)

Crosstalk:  
-80 dB or less (at 1 kHz, between any two channels, 1kHz BPF ON)

**Others**

Channel coding:  
S-I-NRZI PR-IV

Error correction:  
Reed Solomon code

Display:  
Counter, Servo Lock, Tape Remain, Battery Remain, etc.

Audio level meter:  
Ch-1, Ch-2 (indication of Ch-3, 4 is also available by switch)

## Betacam SX VTRs

### DNW-A25WS Betacam SX Portable Recorder

#### Features

- Superb picture quality and high sound quality of the Betacam SX format
- Component digital recording using the advanced compression algorithm of MPEG-2 4:2:2P@ML
- Frame accurate insert/assemble editing
- Combines a VTR, a 6.4-inch(\*) type LCD screen and a built-in speaker into a single unit
- Compact, lightweight and rugged design for field use
- Provides a long recording time of 62 minutes using an S-cassette
- Analog Betacam/Betacam SP playback compatibility
- Betacam SP S-size metal tape cassettes can be used for Betacam SX recording
- Compact dual-deck editor using two DNW-A25WS. The DVCAM portable recorder, DSR-70A can also be docked.
- LCD screen displays both 16:9 and 4:3 aspect ratios without picture squeezing
- Uses a bright VDF (Vacuum Fluorescent Device) to enhance the visibility of sub-menus
- Four-channel, independently editable 16-bit/48-kHz digital audio
- Battery operation (using a BP-L60A/L90A battery) or AC-powered operation (using AC-DN2B AC adaptor)
- Shot mark and Shot data handling
- 525/60, 625/50 switchable
- High-speed color picture search:  $\pm 24$  times normal playback speed
- Noiseless slow playback and DMC (Dynamic Motion Control)
- Analog composite input
- Two analog composite outputs
- Analog 2-ch audio input/output and 2-ch monitor output
- Sony 9-pin remote control interface

(\*) Viewable area measured diagonally.

#### Supplied Accessories

Shoulder belt (1)  
Operation manual (1)  
Maintenance manual (1)

#### Optional Accessories

BKNW-225 Docking Kit  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
AC-550 AC Adaptor  
AC-DN2B AC Adaptor  
BVR-3 Remote Controller  
BCT-SXA tapes Betacam SX Tapes  
LC-DN220 Carrying Case (Hard type)



Betacam SX VTRs

Specifications

General

Power requirements:  
DC 12 V

Power consumption:  
65 W

Operating temperature:  
0 °C to +40 °C (+32 °F to +104 °F)

Storage temperature:  
-20 °C to +60 °C (-4 °F to +140 °F)

Humidity:  
25 to 80% (relative humidity)

Dimensions:  
211 (W) x 149 (H) x 467 (D) mm  
(8 3/8 x 5 7/8 x 18 1/2 inches)

Mass:  
6.5 kg (14 lb 5 oz)

Tape speed  
Betacam SX:  
59.515 mm/s (525 mode), 59.575mm/s  
(625 mode)  
Betacam/Betacam SP:  
118.6 mm/s

Digital playback/recording:  
Max. 62 minutes with BCT-62SXA cassette

Fast forward/rewind time:  
Less than 3 min with BCT-62SXA cassette

Search speed range  
Betacam SX:  
±24 times normal playback speed  
Betacam/Betacam SP:  
±10 times normal playback speed

Servo lock time:  
0.5 s or less (from standby on)

Load/unload time:  
6 s or less

Input/output signal

Analog composite input:  
BNC (x1), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:  
BNC (x2, including one character out), 1.0  
Vp-p, 75 Ω, sync negative

SDI input:  
BNC (x1), SMPTE 259M, 270 Mb/s

SDI output:  
BNC (x2), SMPTE 259M, 270 Mb/s

Analog audio input (CH1,2):  
XLR (x2)

Analog audio output (CH1,2):  
XLR (x2)

Analog monitor output (L,R):  
XLR (x2)

Headphones output:  
Standard jack (x1), stereo

Remote control:  
D-sub 9-pin (x1), Sony 9-pin remote  
interface

Reference input:  
BNC (x1), 0.3 Vp-p, 75 Ω, sync negative  
(with loop through out)

Test:  
AUX 6-pin (x1) (for maintenance)

Time code input:  
BNC (x1)

Time code output:  
BNC (x1)

**LCD Monitor**

Size:  
6.4 inches x 1

Picture elements:  
640 x 360 x 3 pixels (16:9)/640 x 480 x 3  
pixels (4:3)

Luminance / brightness:  
Adjustable by knob

Speaker:  
Built-in speakers x 1, monaural

Display:  
Counter, Servo Lock, Tape Remain, Battery  
Remain, etc.

Audio level meter:  
Ch 1, Ch 2 (indication of Ch 3,4 is also  
available by switch)

## Betacam SX VTRs

### DNW-A25WSP Betacam SX Portable Recorder

#### Features

- Superb picture quality and high sound quality of the Betacam SX format
- Component digital recording using the advanced compression algorithm of MPEG-2 4:2:2P@ML
- Frame accurate insert/assemble editing
- Combines a VTR, a 6.4-inch(\*) type LCD screen and a built-in speaker into a single unit
- Compact, lightweight and rugged design for field use
- Provides a long recording time of 62 minutes using an S-cassette
- Analog Betacam/Betacam SP playback compatibility
- Betacam SP S-size metal tape cassettes can be used for Betacam SX recording
- Compact dual-deck editor using two DNW-A25WS. The DVCAM portable recorder, DSR-70AP can also be docked.
- LCD screen displays both 16:9 and 4:3 aspect ratios without picture squeezing
- Uses a bright VDF (Vacuum Fluorescent Device) to enhance the visibility of sub-menus
- Four-channel, independently editable 16-bit/48-kHz digital audio
- Battery operation (using a BP-L60A/L90A battery) or AC-powered operation (using AC-DN2B AC adaptor)
- Shot mark and Shot data handling
- 525/60, 625/50 switchable
- High-speed color picture search:  $\pm 24$  times normal playback speed
- Noiseless slow playback and DMC (Dynamic Motion Control)
- Analog composite input
- Two analog composite outputs
- Analog 2-ch audio input/output and 2-ch monitor output
- Sony 9-pin remote control interface

(\*) Viewable area measured diagonally.

#### Supplied Accessories

Shoulder belt (1)  
Operation manual (1)  
Maintenance manual (1)

#### Optional Accessories

BKNW-225 Docking Kit  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-GL65 Rechargeable Lithium-ion Battery Pack  
BP-GL95 Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
AC-DN2B AC Adaptor  
AC-550CE AC Adaptor  
BVR-3 Remote Controller  
BCT-SXA tapes Betacam SX Tapes  
LC-DN220 Carrying Case (Hard type)



Betacam SX VTRs

Specifications

General

Power requirements:  
DC 12 V

Power consumption:  
65 W

Operating temperature:  
0 °C to +40 °C (+32 °F to +104 °F)

Storage temperature:  
-20 °C to +60 °C (-4 °F to +140 °F)

Humidity:  
25 to 80% (relative humidity)

Dimensions:  
211 (W) x 149 (H) x 467 (D) mm  
(8 3/8 x 5 7/8 x 18 1/2 inches)

Mass:  
6.5 kg (14 lb 5 oz)

Tape speed  
Betacam SX:  
59.515 mm/s (525 mode), 59.575mm/s  
(625 mode)  
Betacam/Betacam SP:  
101.5 mm/s

Digital playback/recording:  
Max. 62 minutes with BCT-62SXA cassette

Fast forward/rewind time:  
Less than 3 min with BCT-62SXA cassette

Search speed range  
Betacam SX:  
±24 times normal playback speed  
Betacam/Betacam SP:  
±10 times normal playback speed

Servo lock time:  
0.5 s or less (from standby on)

Load/unload time:  
6 s or less

Input/output signal

Analog composite input:  
BNC (x1), 1.0 Vp-p, 75 Ω, sync negative

Analog composite output:  
BNC (x2, including one character out), 1.0  
Vp-p, 75 Ω, sync negative

SDI input:  
BNC (x1), SMPTE 259M, 270 Mb/s

SDI output:  
BNC (x2), SMPTE 259M, 270 Mb/s

Analog audio input (CH1,2):  
XLR (x2)

Analog audio output (CH1,2):  
XLR (x2)

Analog monitor output (L,R):  
XLR (x2)

Headphones output:  
Standard jack (x1), stereo

Remote control:  
D-sub 9-pin (x1), Sony 9-pin remote  
interface

Reference input:  
BNC (x1), 0.3 Vp-p, 75 Ω, sync negative  
(with loop through out)

Test:  
AUX 6-pin (x1) (for maintenance)

Time code input:  
BNC (x1)

Time code output:  
BNC (x1)

**LCD Monitor**

Size:  
6.4 inches x 1

Picture elements:  
640 x 360 x 3 pixels (16:9)/640 x 480 x 3  
pixels (4:3)

Luminance / brightness:  
Adjustable by knob

Speaker:  
Built-in speakers x 1, monaural

Display:  
Counter, Servo Lock, Tape Remain, Battery  
Remain, etc.

Audio level meter:  
Ch 1,Ch 2 (indication of Ch 3,4 is also  
available by switch)

## Betacam SX VTRs

Betacam SX VTRs

J-series VTRs

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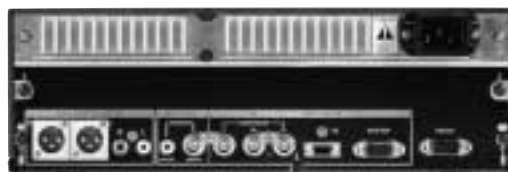
## J-series VTRs

### J-H1 Compact HDCAM Player

The J-H1 is a cost effective, compact and lightweight HDCAM viewer ideal for desk-top use.

#### Features

- HDCAM playback capability
- Supports 1080/50i and 1080/59.9i formats
- Accommodates both small and large cassettes
- Versatile output capability for flexible monitoring
- Equipped with HD analog Y/Pb/Pr component output
- Down conversion built-in
- NTSC or PAL composite video output from both BNC and RCA output connectors
- Equipped with RGB computer display interface (at XGA resolution)
- Optional i.LINK interface board (HKJ-101)
- Shot mark handling
- Tele-File handling (requires Tele-File label MLB-1M-100 and video logging software JZ-1)



#### Supplied Accessories

Operation manual (CD-ROM) (1)  
Vertical stand (1)

#### Optional Accessories

HKJ-101 i.LINK Interface Board

#### Specifications

##### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

50 W

Operating temperature:

+5 to +40°C (+41 to +104°F)

Storage temperature:

-20 to +60 °C (-4 to +140°F)

Humidity:

25 to 80% (relative humidity)

Mass:

7.5 kg (16 lb 9 oz)

Dimensions:

307(W) x 100 (H) x 397 (D) mm  
(12 1/8 x 4 x 15 3/4 inches)

Tape speed

HDCAM:

96.7 mm/s (29.97 Hz)

80.7mm/s (25 Hz)

Playback time

HDCAM:

Max. 124 min (29.97 Hz, with

BCT-124HDL)

Max. 149 min (25 Hz, with BCT-124HDL)

Fast forward/rewind time

Approx. 5 min with BCT-124HD

Search speed range

Shuttle mode:

±21 times normal playback speed

Job mode:

±1 times normal playback speed

Servo lock time:

1 s or less (from standby on)

Load/unload time:

7 s or less

##### Input output

Analog HD video:

BNC (x 3) Y: 0.7 Vp-p, Pb/Pr: ±0.7 Vp-p 75 Ω

EIAJ RC-5237 connector, EIAJ CP-4120 standard

Analog SD video:

BNC (x 1), Pin jack (x 1), 1.0 Vp-p, 75 Ω

Computer display:

D-sub 15 pin, XGA (1024 x 768 dots, RGB, 0.7 V

i.LINK (optional):

IEEE1394

Audio monitoring:

Pin jack (x 2): -10 dBu at 47 kΩ load, unbalanced

XLR (male x 2): +4 dBm, 600 Ω load, low impedance, balanced

Headphone:

JM-60 stereo phone jack, -∞ to -12 dBu at 8 Ω, unbalanced

RS-232C:

D-sub 9 pin male (x 1)

Wireless remote:

BIRCS

EXT SYNC:

BNC x 2

##### HD analog response

Output level:

Y: 700 mV (±5%), Pb/Pr: 700 mV (±5%),

Sync signal: 300 mV (±5%)

Bandwidth:

Y: 0 to 20 MHz + 1.0 dB/-3.0 dB, Pb/Pr: 0 to 7 MHz +1.0 dB/-3.0 dB

S/N ratio:

56 dB or more

Output impedance:

Y, Pb, Pr: 75 Ω (±5%)

Y/C delay:

Y, Pb, Pr: ±15 ns or less

##### - XGA analog response -

Output level:

R: 700 mV (±5%), G: 700 mV (±5%), B: 700 mV (±5%)

Resolution:

XGA

Refresh/rate:

60 Hz

H-frequency:

48.4 kHz

##### SD composite response

Output level:

Y: 59.94i: 714 mV (±5%), 50i: 700 mV (±5%)

Sync: 59.94i: 286 mV (±5%), 50i: 300 mV (±5%)

Burst: 59.94i: 286 mV (±5%), 50i: 300 mV (±5%)

Bandwidth:

0.5 to 5.75 MHz + 0.5 dB/-3.0 dB

S/N ratio:

56 dB or more

Y/C delay:

20 ns or less

K Factor (2T pulse):

1.0% or less

##### Analog audio response

Output level:

XLR: +4±0.5 dBm, -20 dBFS, 600 Ω terminated

PIN: +10±0.5 dBu, -20 dBFS, 47 kΩ terminated

Frequency response:

20 Hz to 20 kHz + 1.0 dB/-1.5 dB

Dynamic range:

More than 85 dB (at 1 kHz, emphasis ON)

Distortion:

Less than 0.1% (at 1 kHz/-20 dBFS, emphasis ON)

Wow and flutter:

Less than 0.18%

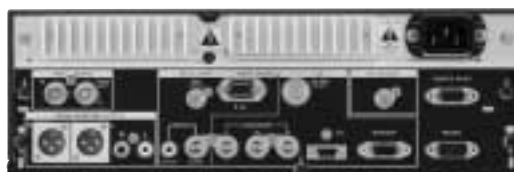
## J-series VTRs

### J-H3 Compact HDCAM Videocassette Player

The J-H3 is a cost effective, compact and lightweight HDCAM viewer ideal for desk-top use. The J-H3 is equipped with a number of features to support 24P production applications.

#### Features

- HDCAM playback capability ●Supporting 23.98/24/25/29.97PsF and 50i/59.94i formats
- Accommodates both small and large cassettes
- Versatile output capability for flexible monitoring
- Equipped with HD analog Y/Pb/Pr component output
- Down conversion built-in ●Equipped with HD-SDI and SD-SDI outputs\*NTSC or PAL composite video output from both BNC and RCA output connectors ●Equipped with RGB computer display interface (at XGA resolution)
- Optional i.LINK interface board (HKJ-101) ●Timecode output ●Reference input ●RS-422 and RS-232C remote interface ●LTC output ●Shot mark handling ●TC character superimposing capability ●Tele-File handling (requires optional Tele-File label MLB-1M-100 and video logging software JZ-1)



#### Supplied Accessories

Operation manual (CD-ROM) (1)  
Vertical stand (1)

#### Optional Accessories

HKJ-101 i.LINK Interface Board

#### Specifications

##### General

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption:

60 W

Operating temperature:

+5 to +40°C (+41 to +104°F)

Storage temperature:

-20 to +60 °C (-4 to +140°F)

Humidity:

25 to 80% (relative humidity)

Mass:

7.5 kg (16 lb 9 oz)

Dimensions:

307(W) x 100 (H) x 397 (D) mm  
(12 1/8 x 4 x 15 3/4 inches)

Tape speed

HDCAM:

96.7 mm/s (29.97 Hz)

80.7 mm/s (25Hz)

77.4 mm/s (24 Hz)

Playback time

HDCAM:

Max. 124 min (29.97 Hz, with BCT-124HDL)

Max. 149 min (25 Hz, with BCT-124HDL)

Max. 155 min (24 Hz, with BCT-124HDL)

Fast forward/rewind time

Approx. 5 min with BCT-124HD

Search speed range

Shuttle mode:

±21 times normal playback speed

Job mode:

±1 times normal playback speed

Servo lock time:

1 s or less (from standby on)

Load/unload time:

7 s or less

#### Input output

Digital HD video:

BNC (x 1), SMPTE-292M

Digital SD video:

BNC (x 1), SMPTE-259M

Analog HD video:

BNC (x 3) Y: 0.7 Vp-p, Pb/Pr: ±0.7 Vp-p 75 Ω

EIAJ RC-5237 connector, EIAJ CP-4120

standard

Analog SD video:

BNC (x 1), Pin jack (x 1), 1.0 Vp-p, 75 Ω

Computer display:

D-sub 15 pin, XGA (1024 x 768 dots, RGB, 0.7 V

I.LINK (optional):

IEEE1394

Time code:

BNC (x 1), SMPTE-12M

Audio monitoring:

Pin jack (x 2): -10 dBu at 47 kΩ load, unbalanced

XLR (male x 2): +4 dBm, 600 Ω load, low impedance, balanced

Headphone:

JM-60 stereo phone jack, -∞ to -12 dBu at 8 Ω, unbalanced

RS-232C:

D-sub 9 pin male (x 1)

RS-422A:

D-sub 9 pin female (x 1), Sony 9-pin remote interface

Wireless remote:

BIRCS

EXT SYNC:

BNC x 2

#### HD analog response

Output level:

Y: 700 mV (±5%), Pb/Pr: 700 mV (±5%), Sync signal: 300 mV (±5%)

Bandwidth:

Y: 0 to 20 MHz + 1.0 dB/-3.0 dB, Pb/Pr: 0 to 7 MHz +1.0 dB/-3.0 dB

S/N ratio:

56 dB or more

Output impedance:

Y, Pb, Pr: 75 Ω (±5%)

Y/C delay:

Y, Pb, Pr: ±15 ns or less

#### XGA analog response

Output level:

R: 700 mV (±5%), G: 700 mV (±5%), B: 700 mV (±5%)

Resolution:

XGA

Refresh/rate:

60 Hz

H-frequency:

48.4 kHz

#### SD composite response

Output level:

Y: 59.94i: 714 mV (±5%), 50i: 700 mV (±5%)

Sync: 59.94i: 286 mV (±5%), 50i: 300 mV (±5%)

Burst: 59.94i: 286 mV (±5%), 50i: 300 mV (±5%)

Bandwidth:

0.5 to 5.75 MHz + 0.5 dB/-3.0 dB

S/N ratio:

56 dB or more

Y/C delay:

20 ns or less

K Factor (2T pulse):

1.0% or less

#### Analog audio response

Output level:

XLR: +4±0.5 dBm, -20 dBFS, 600 Ω terminated

PIN: +10±0.5 dBu, -20 dBFS, 47 kΩ terminated

Frequency response:

20 Hz to 20 kHz + 1.0 dB/-1.5 dB

Dynamic range:

More than 85 dB (at 1 kHz, emphasis ON)

Distortion:

Less than 0.1% (at 1 kHz/-20 dBFS, emphasis ON)

Wow and flutter:

Less than 0.18%

## J-series VTRs

### J-10 1/2" Standard Definition Compact Player

The J-10 Compact Player is an affordable, compact office viewer to be used by producers, journalists and production staff. Retaining the fundamental features of its predecessor designed for viewing, logging and source feeding to the nonlinear editors, the J-10 adds the i.LINK interface, opening the door to the DV World for the Betacam users. In addition, the J-10 has enhanced interfacing capability and operational versatility.



#### Features

- DV-device connectivity
- Powerful playback capability (Betacam, Betacam SP and Betacam SX formats)
- Compact body design
- Replay of both small and large cassettes
- 525/625 versatility
- Analog component output
- Supports wireless infrared remote controller
- Flexible audio outputs



#### Supplied Accessories

Infrared remote controller RM-J1 (1)  
Stand (1)

#### Specifications

##### General

Power requirement:

AC 100 V to 240 V, 50/60 Hz

Power consumption:

55 W

Operating temperature:

+5 °C to +40 °C (+41 °F to +104 °F)

Humidity

25% to 80% (relative humidity)

Mass:

8.1 kg (17 lb 14 oz)

Dimension (W x H x D):

307 x 100 x 397 mm (12 1/8 x 4 x 15 3/4 inches)

Tape speed:

Betacam SX: 59.515 mm/s (525 mode),  
59.575 mm/s (625 mode)

Betacam/Betacam SP: 118.6 mm/s, 101.5 mm/s (625 mode)

Playback time:

Betacam SX: Max. 194 min. with

BCT194SXL

Betacam/Betacam SP: Max. 90 min. (525 mode)/108 min. (625 mode) with

BCT-90MLA

Fast forward/rewind:

Betacam SX: Approx. 5 min. with

BCT-184SXL

Betacam/Betacam SP: Approx. 5 min. with

BCT-90MLA

Search speed range:

Betacam SX:  $\pm 35$  times normal playback speed

Betacam/Betacam SP:  $\pm 18$  times (525 mode),  $\pm 20$  times (625 mode) normal playback speed

Servo lock time:

1.5 s or less (from standby on)

Load/unload time:

7 s or less

##### Input signal

Ext. sync:

BNC (x 1), Frame lock

##### Output signal

Analog composite:

BNC (x 1), Pin Jack (x 1), 1.0 Vp-p, 75  $\Omega$

S-video output:

Mini DIN 4-pin (x 1), Y: 1.0 Vp-p, C: 0.286

Vp-p burst, 75  $\Omega$

Analog component output:

BNC (x 3), Y: 1.0 Vp-p, R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$

i.LINK (DV) output:

6-pin (x 1), IEEE 1394

Monitor output L/R:

Pin Jack (x 2): -10 dBu at 47 k $\Omega$  load, unbalanced, XLR (male x 2): +4 dBm, 600  $\Omega$  load, low impedance, balanced

Headphone output:

JM-60 Stereo Phone Jack,  $-\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced

##### Remote Control

RS-422A:

D-sub 9-pin (female) (x 1), Sony 9-pin remote interface

RS-232C:

D-sub 9-pin (male) (x 1)

Wireless:

SIRCS

## J-series VTRs

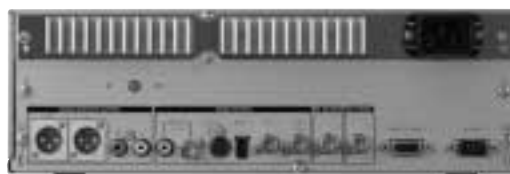
### J-10SDI 1/2" Standard Definition Compact Player

The J-10SDI Compact Player is an affordable, compact office viewer to be used by producers, journalists and production staff. Retaining the fundamental features of its predecessor designed for viewing, logging and source feeding to the nonlinear editors, the J-10SDI adds the i.LINK interface, opening the door to the DV World for the Betacam users. In addition, the J-10SDI has enhanced interfacing capability and operational versatility.



#### Features

- DV-device connectivity ●Powerful playback capability (Betacam, Betacam SP and Betacam SX formats)
- Compact body design ●Replay of both small and large cassettes ●525/625 versatility ●SDI outputs (x 2)
- Supports wireless infrared remote controller ●Flexible audio outputs



#### Supplied Accessories

Infrared remote controller RM-J1 (1)  
Stand (1)

#### Specifications

##### General

Power requirement:

AC 100 V to 240 V, 50/60 Hz

Power consumption:

55 W

Operating temperature:

+5 °C to +40 °C (+41 °F to +104 °F)

Humidity:

25% to 80% (relative humidity)

Mass:

8.1 kg (17 lb 14 oz)

Dimension (W x H x D):

307 x 100 x 397 mm (12 1/8 x 4 x 15 3/4 inches)

Tape speed:

Betacam SX: 59.515 mm/s (525 mode),

59.575 mm/s (625 mode)

Betacam/Betacam SP: 118.6 mm/s, 101.5 mm/s (625 mode)

Playback time:

Betacam SX: Max. 194 min. with

BCT194SXL

Betacam/Betacam SP: Max. 90 min. (525 mode)/108 min. (625 mode) with

BCT-90MLA

Fast forward/rewind:

Betacam SX: Approx. 5 min. with

BCT-184SXL

Betacam/Betacam SP: Approx. 5 min. with

BCT-90MLA

Search speed range:

Betacam SX:  $\pm 35$  times normal playback speed

Betacam/Betacam SP:  $\pm 18$  times (525 mode),  $\pm 20$  times (625 mode) normal playback speed

Servo lock time:

1.5 s or less (from standby on)

Load/unload time:

7 s or less

##### Input signal

Ext. sync:

BNC (x 1), Frame lock

##### Output signal

Analog composite:

BNC (x 1), Pin Jack (x 1), 1.0 Vp-p, 75  $\Omega$

S-video output:

Mini DIN 4-pin (x 1), Y: 1.0 Vp-p, C: 0.286

Vp-p burst, 75  $\Omega$

SDI output:

BNC (x 2), SMPTE 259M, 270 Mb/s, 0.8

Vp-p, 75  $\Omega$

i.LINK (DV) output:

6-pin (x 1), IEEE 1394

Time Code output:

BNC (x 1), 1.0 Vp-p, 75  $\Omega$ , unbalanced

Monitor output L/R:

Pin Jack (x 2): -10 dBu at 47 k $\Omega$  load, unbalanced, XLR (male x 2): +4 dBm, 600  $\Omega$  load, low impedance, balanced

Headphone output:

JM-60 Stereo Phone Jack,  $-\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced

##### Remote Control

RS-422A:

D-sub 9-pin (female) (x 1), Sony 9-pin remote interface

RS-232C:

D-sub 9-pin (male) (x 1)

Wireless:

SIRCS

## J-series VTRs

### J-30 1/2" Standard Definition Compact Player

The J-30 Compact Player is an affordable, compact office viewer to be used by producers, journalists and production staff. Retaining the fundamental features of its predecessor designed for viewing, logging and source feeding to the nonlinear editors, the J-30 adds the i.LINK interface, opening the door to the DV World for the Betacam users. In addition, the J-30 has enhanced interfacing capability and operational versatility.



#### Features

●DV-device connectivity ●Powerful playback capability (Betacam, Betacam SP, Betacam SX, MPEG IMX and Digital Betacam formats) ●Compact body design ●Replay of both small and large cassettes ●525/625 versatility ●Analog component output ●Supports wireless infrared remote controller ●Flexible audio outputs



#### Supplied Accessories

Infrared remote controller RM-J1 (1)  
Stand (1)

#### Specifications

##### General

Power requirement:

AC 100 V to 240 V, 50/60 Hz

Power consumption:

55 W

Operating temperature:

+5 °C to +40 °C (+41 °F to +104 °F)

Humidity:

25% to 80% (relative humidity)

Mass:

8.2 kg (18 lb 1 oz)

Dimension (W x H x D):

307 x 100 x 397 mm (12 1/8 x 4 x 15 3/4 inches)

Tape speed:

Digital Betacam: 96.7 mm/s

MPEG IMX: 64.467 mm/s (525 mode),

53.776 mm/s (625 mode)

Betacam SX: 59.515 mm/s (525 mode),

59.575 mm/s (625 mode)

Betacam/Betacam SP: 118.6 mm/s, 101.5 mm/s (625 mode)

Playback time:

Digital Betacam: Max. 124 min. with BCT-D124L

MPEG IMX: Max. 184 min. (525 mode)/220 min. (625 mode) with BCT-184MXL

Betacam SX: Max. 194 min. with BCT194SXLA

Betacam/Betacam SP: Max. 90 min. (525 mode)/108 min. (625 mode) with BCT-90MLA

Fast forward/rewind:

Digital Betacam: Approx. 5 min. with BCT-D124L

MPEG IMX: Approx. 5 min. with BCT-184MXL

Betacam SX: Approx. 5 min. with BCT-184SXLA

Betacam/Betacam SP: Approx. 5 min. with BCT-90MLA

Search speed range:

Digital Betacam:  $\pm 21$  times normal playback speed

MPEG IMX:  $\pm 32$  times normal playback speed

Betacam SX:  $\pm 35$  times normal playback speed

Betacam/Betacam SP:  $\pm 18$  times (525 mode),  $\pm 20$  times (625 mode) normal playback speed

Servo lock time:

1.5 s or less (from standby on)

Load/unload time:

7 s or less

##### Input signal

Ext. sync:

BNC (x 1), Frame lock

##### Output signal

Analog composite:

BNC (x 1), Pin Jack (x 1), 1.0 Vp-p, 75  $\Omega$

S-video output:

Mini DIN 4-pin (x 1), Y: 1.0 Vp-p, C: 0.286 Vp-p burst, 75  $\Omega$

Analog component output:

BNC (x 3), Y: 1.0 Vp-p, R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$

i.LINK (DV) output:

6-pin (x 1), IEEE 1394

Monitor output L/R:

Pin Jack (x 2): -10 dBu at 47 k $\Omega$  load, unbalanced, XLR (male x 2): +4 dBm, 600  $\Omega$  load, low impedance, balanced

Headphone output:

JM-60 Stereo Phone Jack,  $-\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced

##### Remote Control

RS-422A:

D-sub 9-pin (female) (x 1), Sony 9-pin remote interface

RS-232C:

D-sub 9-pin (male) (x 1)

Wireless:

SIRCS

## J-series VTRs

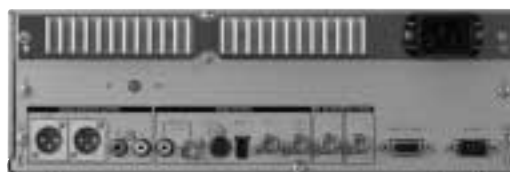
### J-30SDI 1/2" Standard Definition Compact Player

The J-30SDI Compact Player is an affordable, compact office viewer to be used by producers, journalists and production staff. Retaining the fundamental features of its predecessor designed for viewing, logging and source feeding to the nonlinear editors, the J-30SDI adds the i.LINK interface, opening the door to the DV World for the Betacam users. In addition, the J-30SDI has enhanced interfacing capability and operational versatility.



#### Features

- DV-device connectivity
- Powerful playback capability (Betacam, Betacam SP, Betacam SX, MPEG IMX and Digital Betacam formats)
- Compact body design
- Replay of both small and large cassettes
- 525/625 versatility
- SDI outputs (x 2)
- Supports wireless infrared remote controller
- Flexible audio outputs
- UMID and Essence mark readable



#### Supplied Accessories

Infrared remote controller RM-J1 (1)  
Stand (1)

#### Specifications

##### General

Power requirement:

AC 100 V to 240 V, 50/60 Hz

Power consumption:

55 W

Operating temperature:

+5 °C to +40 °C (+41 °F to +104 °F)

Humidity:

25% to 80% (relative humidity)

Mass:

8.2 kg (18 lb 1 oz)

Dimension (W x H x D):

307 x 100 x 397 mm (12 1/8 x 4 x 15 3/4 inches)

Tape speed:

Digital Betacam: 96.7 mm/s

MPEG IMX: 64.467 mm/s (525 mode),  
53.776 mm/s (625 mode)

Betacam SX: 59.515 mm/s (525 mode),  
59.575 mm/s (625 mode)

Betacam/Betacam SP: 118.6 mm/s, 101.5 mm/s (625 mode)

Playback time:

Digital Betacam: Max. 124 min. with  
BCT-D124L

MPEG IMX: Max. 184 min. (525 mode)/220 min. (625 mode) with BCT-184MXL

Betacam SX: Max. 194 min. with  
BCT194SXLA

Betacam/Betacam SP: Max. 90 min. (525 mode)/108 min. (625 mode) with  
BCT-90MLA

Fast forward/rewind:

Digital Betacam: Approx. 5 min. with  
BCT-D124L

MPEG IMX: Approx. 5 min. with  
BCT-184MXL

Betacam SX: Approx. 5 min. with  
BCT-184SXLA

Betacam/Betacam SP: Approx. 5 min. with  
BCT-90MLA

Search speed range:

Digital Betacam:  $\pm 21$  times normal  
playback speed

MPEG IMX:  $\pm 32$  times normal playback  
speed

Betacam SX:  $\pm 35$  times normal playback  
speed

Betacam/Betacam SP:  $\pm 18$  times (525 mode),  $\pm 20$  times (625 mode) normal  
playback speed

Servo lock time:

1.5 s or less (from standby on)

Load/unload time:

7 s or less

##### Input signal

Ext. sync:

BNC (x 1), Frame lock

##### Output signal

Analog composite:

BNC (x 1), Pin Jack (x 1), 1.0 Vp-p, 75  $\Omega$

S-video output:

Mini DIN 4-pin (x 1), Y: 1.0 Vp-p, C: 0.286 Vp-p burst, 75  $\Omega$

SDI output:

BNC (x 2), SMPTE 259M, 270 Mb/s, 0.8 Vp-p, 75  $\Omega$

i.LINK (DV) output:

6-pin (x 1), IEEE 1394

Time Code output:

BNC (x 1), 1.0 Vp-p, 75  $\Omega$ , unbalanced

Monitor output L/R:

Pin Jack (x 2): -10 dBu at 47 k $\Omega$  load, unbalanced, XLR (male x 2): +4 dBm, 600  $\Omega$  load, low impedance, balanced

Headphone output:

JM-60 Stereo Phone Jack,  $-\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced

##### Remote Control

RS-422A:

D-sub 9-pin (female) (x 1), Sony 9-pin remote interface

RS-232C:

D-sub 9-pin (male) (x 1)

Wireless:

SIRCS

J-series VTRs



J-series VTRs

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## DVCAM VTRs

# DSR-2000A DVCAM Editing Recorder

The DSR-2000A is a top-of-the-line editing recorder of the DVCAM Master Series.

### Features

- Playback capability of all DV (25 Mb/s) recorded tapes including DV tapes recorded in SP/LP mode and DVCPRO without any mechanical adaptor (SDTI(QSDI) and i.LINK(DV) do not support DVCPRO playback)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Pread editing capability(\*1) to perform A/B roll editing(\*2) with two VTRs, audio mix/swap and voice over with no delay between video and audio
- Audio cross-fade function
- Four-channel audio editing capability
- Excellent jog audio quality
- VTR-to-VTR editing without external controllers
- Wide range of digital slow speed from -1 to +1 times normal speed
- DMC (Dynamic Motion Control)
- High-speed picture search over a range of 60 times normal speed, in both forward and reverse
- Versatile digital interfaces: SDI, SDTI (QSDI), i.LINK (DV) and AES/EBU digital audio
- Extensive analog interfaces: composite, component, S-Video and XLR audio
- RS-422A remote control interface
- Frame-accurate editing capability
- ClipLink operation
- Full tape dubbing with ClipLink Log Data via SDTI (QSDI) and RS-422A interfaces
- 16:9 aspect ID signal recording
- Process control for highly stable video signals
- TC and VITC
- Channel condition monitoring function
- Built-in signal generator
- Closed caption function

(\*1) Not available through i.LINK(DV) interfaces (\*2) MIX and WIPE only

### Supplied Accessories

- Operating Instructions (1)
- AC Power cord (1)

### Optional Accessories

- RMM-131 Rack Mount Kit
- RCC-G Cables 9-pin/9-pin Cable
- CCF-L Cables DV Cables (6-pin to 6-pin)
- CCFD-L Cables DV Cables (6-pin to 4-pin)
- PDV-N tapes Digital Videocassette Tapes (Non IC type)
- PDV-MEM tapes Digital Videocassette Tapes (Master Tape)
- PDV-ME tapes Digital Videocassette Tapes
- PDV-CL tapes Video Head Cleaning Cassette Tapes (for DVCAM)



DVCAM VTRs

Specifications

General

Power requirements:  
AC 100 to 240 V, 50/60 Hz

Power consumption:  
110 W

Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)

Operating humidity:  
Less than 80%

Storage humidity:  
Less than 90%

Mass:  
18 kg (39 lb 10 oz)

Dimensions:  
427 (W) x 175 (H) x 496.5 (D) mm  
(16 7/8 x 7 x 19 5/8 inches)

Tape speed:  
28.193 mm/s

Recording/Playback time  
Standard size: 184 min. with  
PDV-184ME/184N/184MEM  
Mini size: 40 min. with PDVM-40ME/40N/40MEM

Fast forward/Rewind time  
Standard size: Less than 3 min. with  
PDV-184ME/184N/184MEM  
Mini size: Less than 1 min. with  
PDVM-40ME/40N/40MEM

Search speed  
Shuttle mode: Still to ±60 times normal speed in  
forward and reverse  
Digital slow mode: ±1 times normal speed in  
forward and reverse

Video Performance

Band width (via analog component I/O):  
Luminance:  
30 Hz to 5.0 MHz ±1.0 dB  
5.75 MHz +0/-3.0 dB (Typical measurement)

Chrominance:  
30 Hz to 1.5 MHz +1.0/-5.0 dB

S/N ratio (via analog component I/O):  
More than 55 dB

K-factor (K2T, KPB):  
Less than 2%

Y/C delay:  
Less than 30 ns

Audio Performance

Frequency response  
2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz  
+0.5/-1.0 dB  
4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz  
+0.5/-1.0 dB

Dynamic range:  
More than 85 dB

Distortion (THD + N):  
Less than 0.05%

Input Signals

Video (Analog)  
REF. Video:  
BNC (2), loop-through connection  
Composite, 1.0 Vp-p, 75 Ω, sync negative

Composite Video:  
BNC (2,) loop-through connection  
1.0 Vp-p, 75 Ω, sync negative

Component:  
BNC (3)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
R-Y: 0.7 Vp-p, 75 Ω (75%)  
B-Y: 0.7 Vp-p, 75 Ω (75%)

S-Video:  
DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)  
SDI:  
BNC (2), active-through connection  
Conforms to Serial Digital Interface (270  
Mb/s), SMPTE 259M

SDTI (QSDI):  
BNC (1)  
Conforms to SDTI (270 Mb/s), SMPTE  
305M/322M

i.LINK (DV):  
6-pin (1)  
IEEE1394

Audio (Analog)  
Audio:  
XLR 3-pin, female (4)  
-6/0/+4 dBu, 600 Ω on/off/-60 dBu, high  
impedance

Audio (Digital)  
AES/EBU:  
BNC (2)  
75 Ω, unbalanced

Time Code  
BNC (1): 0.5 Vp-p to 18 Vp-p, 3 kΩ, unbalanced

Output Signals

Video (Analog)  
REF. Video:  
BNC (1)  
0.286 Vp-p, 75 Ω, sync negative

Video 1/2/3(SUPER):  
BNC (3)  
Composite, 1.0 Vp-p, 75 Ω, sync negative

Component:  
BNC (3)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
R-Y: 0.7 Vp-p, 75 Ω (75%)  
B-Y: 0.7 Vp-p, 75 Ω (75%)

S-Video:  
DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)  
SDI:  
BNC (3)  
Conforms to Serial Digital Interface (270  
Mb/s), SMPTE 259M

SDTI (QSDI):  
BNC (1)  
Conforms to SDTI (270 Mb/s), SMPTE  
305M/322M

i.LINK (DV):  
6-pin (1)  
IEEE1394

Audio (Analog)  
Audio:  
XLR 3-pin, male (4)  
+4/0/-6 dBu (selectable by menu)

Monitor:  
RCA (1)  
-11 dBu, 47 kΩ, unbalanced (-18 dBFS)

Headphone:  
JM-60 headphone jack (1)  
-∞ to -13 dBu, 8 Ω, unbalanced (-18 dBFS)

Audio (Digital)  
AES/EBU:  
BNC (2)  
75 Ω, unbalanced

Time Code:  
BNC (1): 2.2 Vp-p, 75 Ω, unbalanced

Remote  
RS-422A: D-sub 9-pin, female (2)  
Video Control: D-sub 15-pin, male (1)  
Control Panel: D-sub 15-pin, female (1)

DVCAM VTRs

## DVCAM VTRs

# DSR-2000AP DVCAM Editing Recorder

The DSR-2000AP is a top-of-the-line editing recorder of the DVCAM Master Series.

### Features

- Playback capability of all DV (25 Mb/s) recorded tapes including DV tapes recorded in SP/LP mode and DVCPRO without any mechanical adaptor (SDTI(QSDI) and i.LINK(DV) do not support DVCPRO playback)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Pread editing capability(\*1) to perform A/B roll editing(\*2) with two VTRs, audio mix/swap and voice over with no delay between video and audio
- Audio cross-fade function
- Four-channel audio editing capability
- Excellent jog audio quality
- VTR-to-VTR editing without external controllers
- Wide range of digital slow speed from -1 to +1 times normal speed
- DMC (Dynamic Motion Control)
- High-speed picture search over a range of 60 times normal speed, in both forward and reverse
- Versatile digital interfaces: SDI, SDTI (QSDI), i.LINK (DV) and AES/EBU digital audio
- Extensive analog interfaces: composite, component, S-Video and XLR audio
- RS-422A remote control interface
- Frame-accurate editing capability
- ClipLink operation
- Full tape dubbing with ClipLink Log Data via SDTI (QSDI) and RS-422A interfaces
- 16:9 aspect ID signal recording
- Process control for highly stable video signals
- TC and VITC
- Channel condition monitoring function
- Built-in signal generator
- Closed caption function

(\*1) Not available through i.LINK(DV) interfaces (\*2) MIX and WIPE only

### Supplied Accessories

- Operating Instructions (1)
- AC Power cord (1)

### Optional Accessories

- RMM-131 Rack Mount Kit
- RCC-G Cables 9-pin/9-pin Cable
- CCF-L Cables DV Cables (6-pin to 6-pin)
- CCFD-L Cables DV Cables (6-pin to 4-pin)
- PDV-N tapes Digital Videocassette Tapes (Non IC type)
- PDV-MEM tapes Digital Videocassette Tapes (Master Tape)
- PDV-ME tapes Digital Videocassette Tapes
- PDV-CL tapes Video Head Cleaning Cassette Tapes (for DVCAM)



DVCAM VTRs

Specifications

General

Power requirements:  
AC 100 to 240 V, 50/60 Hz

Power consumption:  
110 W

Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)

Operating humidity:  
Less than 80%

Storage humidity:  
Less than 90%

Mass:  
18 kg (39 lb 10 oz)

Dimensions:  
427 (W) × 175 (H) × 496.5 (D) mm  
(16 7/8 × 7 × 19 5/8 inches)

Tape speed:  
28.221 mm/s

Recording/Playback time  
Standard size: 184 min. with  
PDV-184ME/184N/184MEM  
Mini size: 40 min. with PDVM-40ME/40N/40MEM

Fast forward/Rewind time:  
Standard size: Less than 3 min. with  
PDV-184ME/184N/184MEM  
Mini size: Less than 1 min. with  
PDVM-40ME/40N/40MEM

Search speed  
Shuttle mode: Still to ±60 times normal speed in  
forward and reverse  
Digital slow mode: ±1 times normal speed in  
forward and reverse

Video Performance

Band width (via analogue component I/O):  
Luminance:  
25 Hz to 5.5 MHz +1.0/-2.0 dB  
5.75 MHz +0/-3.0 dB (Typical measurement)

Chrominance  
: 25 Hz to 2.0 MHz +1.0/-2.0 dB

S/N ratio (via analogue component I/O):  
More than 55 dB

K-factor (K2T, KPB):  
Less than 2.0%

Y/C delay:  
Less than 30 ns

Audio Performance

Frequency response:  
2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz  
+0.5/-1.0 dB  
4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz  
+0.5/-1.0 dB

Dynamic range:  
More than 90 dB

Distortion (THD + N):  
Less than 0.05%

Input Signals

Video (Analog)  
REF. Video:  
BNC (2), loop-through connection  
Composite, 1.0 Vp-p, 75 Ω, sync negative

Video:  
BNC (2), loop-through connection  
Composite, 1.0 Vp-p, 75 Ω, sync negative

Component:  
BNC (3)  
Y:1.0 Vp-p, 75 Ω, sync negative  
R-Y:0.7 Vp-p, 75 Ω (100%)  
B-Y:0.7 Vp-p, 75 Ω (100%)

S-Video:  
DIN 4-pin (1)  
Y:1.0 Vp-p, 75 Ω, sync negative  
C:0.3 Vp-p, 75 Ω (at burst level)

Video (Digital)  
SDI:  
BNC (2), active-through connection  
Conforms to Serial Digital Interface (270  
Mb/s), ITU-R BT.656

SDTI (QSDI):  
BNC (1)  
Conforms to SDTI (270 Mb/s), SMPTE  
305M/322M

i.LINK (DV):  
6-pin (1)  
IEEE1394

Audio (Analog)  
Audio:  
XLR 3-pin, female (4)  
-6/0/+4 dBu, 600 Ω on/off/-60 dBu, high  
impedance

Audio (Digital)  
AES/EBU:  
BNC (2), 75 Ω, unbalanced

Time Code:  
BNC (1), 0.5 Vp-p to 18 Vp-p, 3 kΩ, unbalanced

Output Signals

Video (Analog)  
REF.  
Vide: BNC (1)  
0.3 Vp-p, 75 Ω, sync negative

Video 1/2/3(SUPER) :  
BNC (3)  
Composite, 1.0 Vp-p, 75 Ω, sync negative

Component:  
BNC (3)  
Y:1.0 Vp-p, 75 Ω, sync negative  
R-Y:0.7 Vp-p, 75 Ω (100%)  
B-Y:0.7 Vp-p, 75 Ω (100%)

S-Video:  
DIN 4-pin (1)  
Y:1.0 Vp-p, 75 Ω, sync negative  
C:0.3 Vp-p, 75 Ω (at burst level)

Video (Digital)  
SDI:  
BNC (3)  
Conforms to Serial Digital Interface (270  
Mb/s), ITU-R BT.656

SDTI (QSDI):  
BNC (1)  
Conforms to SDTI (270 Mb/s), SMPTE  
305M/322M

i.LINK (DV):  
6-pin (1)  
IEEE1394

Audio (Analog)  
Audio:  
XLR 3-pin, male (4)  
+4/0/-6 dBu (selectable by menu)

Monitor:  
RCA (1)  
-11 dBu, 47 kΩ, unbalanced (-18 dBFS)

Headphone:  
JM-60 headphone jack (1)  
-∞ to -13 dBu, 8 Ω, unbalanced (-18 dBFS)

Audio (Digital)  
AES/EBU:  
BNC (2), 75 Ω, unbalanced

Time Code  
BNC: (1), 2.2 Vp-p, 75 Ω, unbalanced

Remote  
RS-422A: D-sub 9-pin, female (2)  
Video Control: D-sub 15-pin, male (1)  
Control Panel: D-sub 15-pin, female (1)

## DVCAM VTRs

# DSR-1800A DVCAM Editing Recorder

The DSR-1800A is an editing recorder of the DVCAM Master Series.

### Features

- Playback capability of all DV (25 Mb/s) recorded tapes including DV tapes recorded in SP/LP mode and DVCPRO without any mechanical adaptor (i.LINK(DV) does not support DVCPRO playback)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Preread editing capability(\*1) to perform A/B roll editing(\*2) with two VTRs, audio mix/swap and voice over with no delay between video and audio
- Audio cross-fade function
- Four-channel audio editing capability
- Excellent jog audio quality
- VTR-to-VTR editing without external controllers
- Wide range of digital slow speed from -1 to +1 times normal speed
- DMC (Dynamic Motion Control)
- High-speed picture search over a range of 60 times normal speed, in both forward and reverse
- Versatile digital interfaces: i.LINK (DV) as standard, SDI and AES/EBU digital audio with the DSBK-1801 optional board
- Extensive analog interfaces: composite, component, S-Video and XLR audio
- RS-422A remote control interface
- Frame-accurate editing capability
- ClipLink operation
- 16:9 aspect ID signal recording
- Process control for highly stable video signals
- TC and VITC
- Channel condition monitoring function
- Built-in signal generator
- Closed caption function

(\*1) Not available through i.LINK(DV) interfaces (\*2) MIX and WIPE only

### Supplied Accessories

Operating Instructions (1)

AC Power cord (1)

### Optional Accessories

DSBK-1801 SDI, AES/EBU Input/Output Board

RMM-131 Rack Mount Kit

RCC-G Cables 9-pin/9-pin Cable

CCF-L Cables DV Cables (6-pin to 6-pin)

CCFD-L Cables DV Cables (6-pin to 4-pin)

PDV-N tapes Digital Videocassette Tapes

(Non IC type)

PDV-MEM tapes Digital Videocassette Tapes

(Master Tape)

PDV-ME tapes Digital Videocassette Tapes

PDV-CL tapes Video Head Cleaning Cassette

Tapes (for DVCAM)



DVCAM VTRs

Specifications

General

Power requirements:  
AC 100 to 240 V, 50/60 Hz

Power consumption:  
110 W

Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)

Operating humidity:  
Less than 80%

Storage humidity:  
Less than 90%

Mass:  
18 kg (39 lb 10 oz)

Dimensions:  
427 (W) × 175 (H) × 496.5 (D) mm  
(16 7/8 × 7 × 19 5/8 inches)

Tape speed:  
28.193 mm/s

Recording/Playback time  
Standard size: 184 min. with  
PDV-184ME/184N/184MEM  
Mini size: 40 min. with  
PDVM-40ME/40N/40MEM

Fast forward/Rewind time  
Standard size: Less than 3 min. with  
PDV-184ME/184N/184MEM  
Mini size: Less than 1 min. with  
PDVM-40ME/40N/40MEM

Search speed  
Shuttle mode: Still to ±60 times normal  
speed in forward and reverse  
Digital slow mode: ±1 times normal speed  
in forward and reverse

Video Performance

Band width (via analog component I/O):  
Luminance:  
30 Hz to 5.0 MHz ±1.0 dB  
5.75 MHz +0/-3.0 dB (Typical  
measurement)

Chrominance:  
30 Hz to 1.5 MHz +1.0/-5.0 dB

S/N ratio (via analog component I/O):  
More than 55 dB

K-factor (K2T, KPB):  
Less than 2%

Y/C delay:  
Less than 30 ns

Audio Performance

Frequency response  
2CH mode (48 kHz/16-bit): 20 Hz to 20  
kHz +0.5/-1.0 dB  
4CH mode (32 kHz/12-bit): 20 Hz to 14.5  
kHz +0.5/-1.0 dB

Dynamic range:  
More than 85 dB

Distortion (THD + N):  
Less than 0.05%

Input Signals

Video (Analog)  
REF. Video:  
BNC (2), loop-through connection  
Composite, 1.0 Vp-p, 75 Ω, sync  
negative

Composite Video:  
BNC (2), loop-through connection  
1.0 Vp-p, 75 Ω, sync negative

Component:  
BNC (3)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
R-Y: 0.7 Vp-p, 75 Ω (75%)  
B-Y: 0.7 Vp-p, 75 Ω (75%)

S-Video:  
DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)  
SDI:  
BNC (2), active-through connection  
(using optional DSBK-1801)  
Conforms to Serial Digital Interface (270  
Mb/s), SMPTE 259M

i.LINK (DV):  
6-pin (1)  
IEEE1394

Audio (Analog)  
Audio:  
XLR 3-pin, female (4)  
-6/0/+4 dBu, 600 Ω on/off/-60 dBu, high  
impedance

Audio (Digital)  
AES/EBU:  
BNC (2) (using optional DSBK-1801)  
75 Ω, unbalanced

Time Code  
BNC (1): 0.5 Vp-p to 18 Vp-p, 3 kΩ,  
unbalanced

Output Signals

Video (Analog)  
REF. Video:  
BNC (1)  
0.286 Vp-p, 75 Ω, sync negative

Video 1/2/3(SUPER):  
BNC (3)  
Composite, 1.0 Vp-p, 75 Ω, sync  
negative

Component:  
BNC (3)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
R-Y: 0.7 Vp-p, 75 Ω (75%)  
B-Y: 0.7 Vp-p, 75 Ω (75%)

S-Video:  
DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)  
SDI:  
BNC (3) (using optional DSBK-1801)  
Conforms to Serial Digital Interface (270  
Mb/s), SMPTE 259M

i.LINK (DV):  
6-pin (1)  
IEEE1394

Audio (Analog)  
Audio:  
XLR 3-pin, male (4)  
+4/0/-6 dBu (selectable by menu)

Monitor:  
RCA (1)  
-11 dBu, 47 kΩ, unbalanced (-18 dBFS)

Headphone:  
JM-60 headphone jack (1)  
-∞ to -13 dBu, 8 Ω, unbalanced (-18  
dBFS)

Audio (Digital)  
AES/EBU:  
BNC (2) (using optional DSBK-1801)  
75 Ω, unbalanced

Time Code:  
BNC (1): 2.2 Vp-p, 75 Ω, unbalanced

Remote  
RS-422A: D-sub 9-pin, female (2)  
Video Control: D-sub 15-pin, male (1)  
Control Panel: D-sub 15-pin, female (1)

## DVCAM VTRs

# DSR-1800AP DVCAM Editing Recorder

The DSR-1800A is an editing recorder of the DVCAM Master Series.

### Features

- Playback capability of all DV (25 Mb/s) recorded tapes including DV tapes recorded in SP/LP mode and DVCPRO without any mechanical adaptor (i.LINK(DV) does not support DVCPRO playback)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Preread editing capability(\*1) to perform A/B roll editing(\*2) with two VTRs, audio mix/swap and voice over with no delay between video and audio
- Audio cross-fade function
- Four-channel audio editing capability
- Excellent jog audio quality
- VTR-to-VTR editing without external controllers
- Wide range of digital slow speed from -1 to +1 times normal speed
- DMC (Dynamic Motion Control)
- High-speed picture search over a range of 60 times normal speed, in both forward and reverse
- Versatile digital interfaces: i.LINK (DV) as standard, SDI and AES/EBU digital audio with the DSBK-1801 optional board
- Extensive analog interfaces: composite, component, S-Video and XLR audio
- RS-422A remote control interface
- Frame-accurate editing capability
- ClipLink operation
- 16:9 aspect ID signal recording
- Process control for highly stable video signals
- TC and VITC
- Channel condition monitoring function
- Built-in signal generator
- Closed caption function

(\*1) Not available through i.LINK(DV) interfaces (\*2) MIX and WIPE only

### Supplied Accessories

Operating Instructions (1)  
AC Power cord (1)

### Optional Accessories

RMM-131 Rack Mount Kit  
RCC-G Cables 9-pin/9-pin Cable  
CCF-L Cables DV Cables (6-pin to 6-pin)  
CCFD-L Cables DV Cables (6-pin to 4-pin)  
PDV-N tapes Digital Videocassette Tapes (Non IC type)  
PDV-MEM tapes Digital Videocassette Tapes (Master Tape)  
PDV-ME tapes Digital Videocassette Tapes  
PDV-CL tapes Video Head Cleaning Cassette Tapes (for DVCAM)

### Optional Boards

DSBK-1801 SDI,AES/EBU Input/Output Board



DVCAM VTRs

Specifications

GENERAL

Power requirements:  
AC 100 V to 240 V, 50/60 Hz

Power consumption:  
100 W (with all options)

Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)

Operating humidity:  
Less than 80%

Storage humidity:  
Less than 90%

Weight:  
13 kg (28 lb 10 oz)

Dimensions (W x H x D):  
427 x 174 x 400 mm (16 7/8 x 6 7/8 x 15 3/4 inches)

Tape speed:  
28.221 mm/s

Recording/Playback time  
Standard size: 184 min. with  
PDV-184ME/184N/184MEM  
Mini size: 40 min. with  
PDVM-40ME/40N/40MEM

Fast forward/Rewind time  
Standard size: Less than 3 min. with  
PDV-184ME/184N/184MEM  
Mini size: Less than 1 min. with  
PDVM-40ME/40N/40MEM

Search speed  
Shuttle mode: Still to ±60 times normal speed  
Digital slow mode: ±0.5 times normal speed

VIDEO PERFORMANCE

Bandwidth (via analog component I/O)  
Luminance: 25 Hz to 5.0 MHz ±1.0 dB  
Chrominance: 25 Hz to 2.0 MHz +1.0/-2.0 dB

S/N ratio (via analog component I/O):  
More than 55 dB

K-factor (K2T, KPB):  
Less than 2.0%

Y/C delay:  
Less than 30 ns

AUDIO PERFORMANCE

Frequency response  
2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz +0.5/-1.0 dB  
4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz +0.5/-1.0 dB

Dynamic range:  
More than 90 dB

Distortion (THD + N):  
Less than 0.05%

INPUT SIGNALS

VIDEO (ANALOG)  
REF. Video:  
BNC (2), loop-through connection  
0.3 Vp-p, 75 Ω, sync negative

Composite Video:  
BNC(2), loop-through connection  
1.0 Vp-p, 75 Ω, sync negative

Component:  
BNC (3)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
R-Y: 0.7 Vp-p, 75 Ω (100%)  
B-Y: 0.7 Vp-p, 75 Ω (100%)

S-Video:  
DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.3 Vp-p, 75 Ω (at burst level)

VIDEO (DIGITAL)

SDI :  
BNC (2), active-through connection  
(using optional DSBK-1801)  
Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656

i.LINK (DV) :  
6-pin (1)  
IEEE 1394

AUDIO (ANALOG)  
Audio :  
XLR 3-pin, female (4)  
-6/-3/0/+4 dBu (selectable by menu)  
-60 dBu (high impedance)/600 Ω  
OFF/ON

AUDIO (DIGITAL)  
AES/EBU :  
BNC (2) (using optional DSBK-1801)  
75 Ω, unbalanced

TIME CODE:  
BNC(1)  
0.5 Vp-p to 18 Vp-p, 3 kΩ unbalanced

OUTPUT SIGNALS

VIDEO (ANALOG)  
REF. Video:  
BNC (1)  
0.3 Vp-p, 75 Ω, sync negative

Video 1/2(SUPER):  
BNC (2)  
Composite, 1.0 Vp-p, 75 Ω, sync negative

Component :  
BNC (3)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
R-Y: 0.7 Vp-p, 75 Ω (100%)  
B-Y: 0.7 Vp-p, 75 Ω (100%)

S-Video:  
DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.3 Vp-p, 75 Ω (at burst level)

VIDEO (DIGITAL)

SDI:  
BNC (2) (using optional DSBK-1801)  
Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656

i.LINK (DV):  
6-pin (1)  
IEEE 1394

AUDIO (ANALOG)  
Audio:  
XLR 3-pin, male (4)  
-6/-3/0/+4 dBu (selectable by menu)

Monitor:  
RCA (1)  
-9 dBu, 47 kΩ, unbalanced (-18 dBFS)

Headphone:  
JM-60 headphone jack (1)  
-∞ to -11 dBu, 8 Ω, unbalanced (-18 dBFS)

AUDIO (DIGITAL)

AES/EBU :  
BNC (2) (using optional DSBK-1801)  
75 Ω, unbalanced

TIME CODE:  
BNC(1), 2.2 Vp-p, 75 Ω, unbalanced

REMOTE  
RS-422A: D-sub 9-pin, female (1)  
Video Control: D-sub 15-pin, male (1)  
CONTROL S (SIRCS): Stereo mini jack (1)

## DVCAM VTRs

# DSR-1600A DVCAM Editing Player

The DSR-1600A is an editing player of the DVCAM Master Series.

### Features

- Superb picture quality of the DVCAM format
- Playback capability of DV (25 Mb/s) recorded tapes including DV tapes recorded in SP mode and DVCPRO tapes without a mechanical adaptor (i.LINK (DV) interface does not support DVCPRO playback)
- Excellent jog audio capability
- DMC (Dynamic Motion Control)
- Wide range of digital slow speed from -0.5 to +0.5 times normal speed
- High-speed picture search over a range of 60 times normal speed, in both forward and reverse
- Versatile digital interfaces: i.LINK (DV) as standard, SDI and AES/EBU digital audio with the DSBK-1601 optional board
- Extensive analog interfaces: composite, component, S-Video and XLR audio
- RS-422A remote control interface
- Frame-accurate editing capability
- ClipLink operation
- Video process control for greater control of both analog and digital outputs
- TC and VITC
- Universal powering system (AC 100 V to 240 V)
- Three-size cassette compartment to ensure compatibility with DV(25Mb/s) recorded tapes of all size and types
- Closed caption function
- Jog dial on front panel
- Channel condition monitoring function



### Supplied Accessories

- AC power cord (1)
- Operating instructions (1)

### Optional Accessories

- DSBK-1601 SDI, AES/EBU Output Board
- RMM-131 Rack Mount Kit
- RCC-G Cables 9-pin/9-pin Cable
- CCF-L Cables DV Cables (6-pin to 6-pin)
- CCFD-L Cables DV Cables (6-pin to 4-pin)
- PDV-N tapes Digital Videocassette Tapes (Non IC type)
- PDV-MEM tapes Digital Videocassette Tapes (Master Tape)
- PDV-ME tapes Digital Videocassette Tapes
- PDV-CL tapes Video Head Cleaning Cassette Tapes (for DVCAM)

### Specifications

#### GENERAL

- Power requirements: AC 100 V to 240 V, 50/60 Hz
- Power consumption: 70 W (with all options)
- Operating temperature: 5 °C to 40 °C (41 °F to 104 °F)
- Storage temperature: -20 °C to 60 °C (-4 °F to 140 °F)
- Operating humidity: Less than 80%
- Storage humidity: Less than 90%
- Weight: 13 kg (28 lb 10 oz)
- Dimensions (W x H x D): 427 x 174 x 400 mm (16 7/8 x 6 7/8 x 15 3/4 inches)
- Tape speed: 28.193 mm/s

### Recording/Playback time

- Standard size: 184 min. with PDV-184ME/184N/184MEM
- Mini size: 40 min. with PDVM-40ME/40N/40MEM
- Fast forward/Rewind time
- Standard size: Less than 3 min. with PDV-184ME/184N/184MEM
- Mini size: Less than 1 min. with PDVM-40ME/40N/40MEM

### Search speed

- Shuttle mode: Still to  $\pm 60$  times normal speed
- Digital slow mode:  $\pm 0.5$  times normal speed

### VIDEO PERFORMANCE

- Bandwidth (via analog component I/O)
  - Luminance: 30 Hz to 5.0 MHz  $\pm 1.0$  dB
  - Chrominance: 30 Hz to 1.5 MHz  $\pm 1.0$  dB
- S/N ratio (via analog component I/O): More than 55 dB
- K-factor (K2T, KPB): Less than 2%
- Y/C delay: Less than 30 ns

### AUDIO PERFORMANCE

- Frequency response
  - 2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz  $\pm 0.5$  dB
  - 4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz  $\pm 0.5$  dB
- Dynamic range: More than 90 dB
- Distortion (THD + N): Less than 0.05%

### Input/Output Signals

- VIDEO Input (ANALOG)
  - REF. Video: BNC(2), loop-through connection
  - 0.286 Vp-p, 75  $\Omega$ , sync negative
- VIDEO Output (ANALOG)
  - REF. Video: BNC(1)
  - 0.286 Vp-p, 75  $\Omega$ , sync negative

### Composite 1/2(SUPER):

- BNC(2)
- 1.0 Vp-p, 75  $\Omega$ , sync negative
- Component: BNC(3)
  - Y: 1.0 Vp-p, 75  $\Omega$ , sync negative
  - R-Y: 0.7 Vp-p, 75  $\Omega$  (75%)
  - B-Y: 0.7 Vp-p, 75  $\Omega$  (75%)
- S-Video: DIN 4-pin (1)
  - Y: 1.0 Vp-p, 75  $\Omega$ , sync negative
  - C: 0.286 Vp-p, 75  $\Omega$  (at burst level)

### VIDEO Output (DIGITAL)

- SDI: BNC(2) (using optional DSBK-1601)
  - Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M
- i.LINK (DV): 6-pin (1)
  - IEEE 1394 based
- AUDIO Output (ANALOG)
  - Audio: XLR 3-pin male (4)
    - 6/0/+4 dBu (selectable by menu)
  - Monitor: RCA (1)
    - 11 dBu, 47 k $\Omega$ , unbalanced (-20 dBFS)
  - Headphone: JM-60 headphone jack (1)
    - $\infty$  to -13 dBu, 8  $\Omega$ , unbalanced (-20 dBFS)
- AUDIO Output (DIGITAL)
  - AES/EBU : BNC (2) (using optional DSBK-1601)
    - 75  $\Omega$ , unbalanced
- TIME CODE
  - Time Code Out: BNC (1), 2.2 Vp-p, 75  $\Omega$ , unbalanced
- REMOTE
  - RS-422A: D-sub 9-pin (female) (1)
  - Video Control: D-sub 15-pin (male) (1)
  - CONTROL S (SIRCS): Stereo mini jack (1)

## DVCAM VTRs

# DSR-1600AP DVCAM Editing Player

The DSR-1600AP is an editing player of the DVCAM Master Series.

### Features

- Superb picture quality of the DVCAM format
- Playback capability of DV (25 Mb/s) recorded tapes including DV tapes recorded in SP mode and DVCPRO tapes without a mechanical adaptor (i.LINK (DV) interface does not support DVCPRO playback)
- Excellent jog audio capability
- DMC (Dynamic Motion Control)
- Wide range of digital slow speed from -0.5 to +0.5 times normal speed
- High-speed picture search over a range of 60 times normal speed, in both forward and reverse
- Versatile digital interfaces: i.LINK (DV) as standard, SDI and AES/EBU digital audio with the DSBK-1601 optional board
- Extensive analog interfaces: composite, component, S-Video and XLR audio
- RS-422A remote control interface
- Frame-accurate editing capability
- ClipLink operation
- Video process control for greater control of both analog and digital outputs
- TC and VITC
- Universal powering system (AC 100 V to 240 V)
- Three-size cassette compartment to ensure compatibility with DV(25Mb/s) recorded tapes of all size and types
- Closed caption function
- Jog dial on front panel
- Channel condition monitoring function



### Supplied Accessories

- AC power cord (1)
- Operating instructions (1)

### Optional Accessories

- DSBK-1601 SDI, AES/EBU Output Board
- RMM-131 Rack Mount Kit
- RCC-G Cables 9-pin/9-pin Cable
- CCF-L Cables DV Cables (6-pin to 6-pin)
- CCFD-L Cables DV Cables (6-pin to 4-pin)
- PDV-N tapes Digital Videocassette Tapes (Non IC type)
- PDV-MEM tapes Digital Videocassette Tapes (Master Tape)
- PDV-ME tapes Digital Videocassette Tapes
- PDV-CL tapes Video Head Cleaning Cassette Tapes (for DVCAM)

DVCAM VTRs

Specifications

GENERAL

Power requirements:  
AC 100 V to 240 V, 50/60 Hz

Power consumption:  
70 W (with all options)

Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)

Operating humidity:  
Less than 80%

Storage humidity:  
Less than 90%

Weight:  
13 kg (28 lb 10 oz)

Dimensions (W x H x D):  
427 x 174 x 400 mm (16 7/8 x 6 7/8 x 15 3/4 inches)

Tape speed:  
28.221 mm/s

Recording/Playback time  
Standard size: 184 min. with  
PDV-184ME/184N/184MEM  
Mini size: 40 min. with  
PDVM-40ME/40N/40MEM

Fast forward/Rewind time  
Standard size: Less than 3 min. with  
PDV-184ME/184N/184MEM  
Mini size: Less than 1 min. with  
PDVM-40ME/40N/40MEM

Search speed  
Shuttle mode: Still to ±60 times normal speed  
Digital slow mode: ±0.5 times normal speed

VIDEO PERFORMANCE

Bandwidth (via analog component I/O)  
Luminance: 25 Hz to 5.0 MHz ±1.0 dB  
Chrominance: 25 Hz to 2.0 MHz +1.0/-2.0 dB

S/N ratio (via analog component I/O):  
More than 55 dB

K-factor (K2T, KPB):  
Less than 2%

Y/C delay:  
Less than 30 ns

AUDIO PERFORMANCE

Frequency response  
2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz +0.5/-1.0 dB  
4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz +0.5/-1.0 dB

Dynamic range:  
More than 90 dB

Distortion (THD + N):  
Less than 0.05%

INPUT SIGNALS

VIDEO (ANALOG)  
REF. Video:  
BNC (2), loop-through connection  
0.3 Vp-p, 75 Ω, sync negative

OUTPUT SIGNALS

VIDEO (ANALOG)  
REF. Video:  
BNC (1)  
0.3 Vp-p, 75 Ω, sync negative

Composite Video 1/2(SUPER):  
BNC (2)  
1.0 Vp-p, 75 Ω, sync negative

Component:  
BNC (3)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
R-Y: 0.7 Vp-p, 75 Ω (100%)  
B-Y: 0.7 Vp-p, 75 Ω (100%)

S-Video:  
DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.3 Vp-p, 75 Ω (at burst level)

VIDEO (DIGITAL)  
SDI :  
BNC(2) (using optional DSBK-1601)  
Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656

I.LINK(DV)  
6-pin (1)  
IEEE 1394

AUDIO (ANALOG)  
Audio:  
XLR 3-pin, male (4)  
-6/-3/0/+4 dBu (selectable by menu)

Monitor:  
RCA (1)  
-9 dBu, 47 kΩ, unbalanced (-18 dBFS)

Headphone:  
JM-60 headphone jack (1)  
-∞ to -11 dBu, 8 Ω, unbalanced (-18 dBFS)

AUDIO (DIGITAL)  
AES/EBU:  
BNC(2) (using optional DSBK-1601)  
75 Ω, unbalanced

TIME CODE:  
BNC (1): 2.2 Vp-p, 75 Ω, unbalanced

REMOTE  
RS-422A: D-sub 9-pin, female (1)  
Video Control: D-sub 15-pin, male (1)  
CONTROL S (SIRCS): Stereo mini jack (1)

DVCAM VTRs

## DVCAM VTRs

### DSR-1500A Editing Recorder

#### Features

- Compact, half-rack size
- Superb picture quality of the DVCAM format
- Playback compatibility with DV (25 Mb/s) family formats including consumer DV (SP mode) and DVCPRO without a mechanical adaptor(\*)
- DV format recording capability (SP mode, 10-μm track pitch recording) (\*\*)
- Long recording time: max. 184 min (DVCAM mode)/276 min (DV SP mode) with a standard-size cassette, and max. 40 min (DVCAM mode)/60 min (DV SP mode) with a mini cassette
- Versatile digital interfaces: equipped with i.LINK (DV), and optional SDI, SDTI (QSDI) and AES/EBU interfaces
- Extensive range of analog interfaces: composite, component, S-video and two channels of XLR audio
- Variable speed playback within the range of -0.5 to +0.5 times normal play speed
- High-speed color picture search: 60 times normal play speed in both forward and reverse
- Menu keys on front panel for frame by frame picture search
- RS-422A remote control interface
- Excellent jog audio quality
- ClipLink operation
- Full tape dubbing including ClipLink Log Data using SDTI (QSDI) and RS-422A interfaces
- 16:9 aspect ID signal recording
- Video process control for both analog and digital outputs
- TC and VITC
- Built-in signal generator
- Universal powering system: allows the use of AC100 V to 240 V power sources
- Three-size cassette compartment to ensure compatibility with DV(25Mb/s) recorded tapes of all size and types
- Closed caption function

(\*) SDTI (QSDI) interface does not support DVCPRO playback. (\*\*) Assemble or insert editing is not possible.

#### Supplied Accessories

AC Power cord (1)

#### Optional Accessories

DSBK-1501 Digital Input/Output Board

DSBK-1504 Analog Input Board

DSRM-10 Remote Control Unit

RCC-G Cables 9-pin/9-pin Cable

CCF-L Cables DV Cables (6-pin to 6-pin)

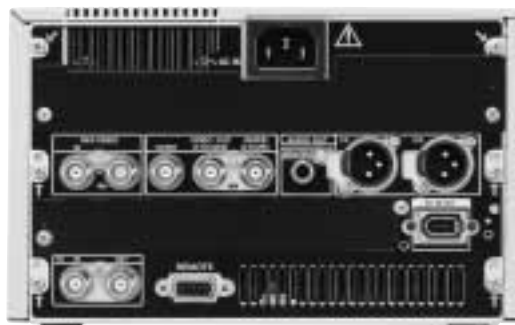
CCFD-L Cables DV Cables (6-pin to 4-pin)

PDV-MEM tapes Digital Videocassette Tapes (Master Tape)

PDV-N tapes Digital Videocassette Tapes (Non IC type)

PDV-CL tapes Video Head Cleaning Cassette Tapes (for DVCAM)

PDV-ME tapes Digital Videocassette Tapes



DVCAM VTRs

Specifications

General

Power requirements:

AC 100 V to 240 V, 50/60 Hz

Power consumption:

55 W (with all options)

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

-20 °C to 60 °C (-4 °F to 140 °F)

Operating humidity:

Less than 80%

Storage humidity:

Less than 90%

Mass:

6 kg (13 lb 3 oz)

Dimensions (W x H x D):

210 x 130 x 420 mm (8 3/8 x 5 1/8 x 16 5/8 inches)

Tape speed:

28.193 mm/s

Recording/Playback time

DVCAM mode:

Standard size: 184 min. with

PDV-184ME/184N/184MEM

Mini size: 40 min. with

PDVM-40ME/40N/40MEM

DV (SP) mode:

Standard size: 276 min. with

PDV-184ME/184N/184MEM

Mini size: 60 min. with

PDVM-40ME/40N/40MEM

Fast forward/Rewind time

Standard size: Less than 3 min. with

PDV-184ME/184N/184MEM

Mini size: Less than 1 min. with

PDVM-40ME/40N/40MEM

Search speed

Shuttle mode: Still to ±60 times normal speed

Digital slow mode: ±0.5 times normal speed

Video Performance

Bandwidth (via analog component I/O)

Luminance: 30 Hz to 5.0 MHz +1.0/-1.5 dB

Chrominance: 30 Hz to 1.5 MHz +1.0/-5.0 dB

S/N ratio (via analog component I/O):

More than 55 dB

K-factor (K2T, KPB):

Less than 2%

Y/C delay:

Less than 30 ns

Audio Performance

Frequency response

2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz

±1.0 dB

4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz

±1.0 dB

Dynamic range:

More than 87 dB

Distortion (THD + N):

Less than 0.07%

Input Signals

VIDEO (ANALOG)

REF. Video: BNC (2), loop-through connection

0.286 Vp-p, 75 Ω sync negative

Composite Video: BNC (2), loop-through

connection(\*1) \*Using optional DSBK-1504

1.0 Vp-p, 75 Ω, sync negative

Component: BNC (3) (\*1) \*Using optional

DSBK-1504

Y: 1.0 Vp-p, 75 Ω, sync negative

R-Y: 0.7 Vp-p, 75 Ω (75%)

B-Y: 0.7 Vp-p, 75 Ω (75%)

S-Video: BNC (2) (\*1) \*Using optional

DSBK-1504

Y: 1.0 Vp-p, 75 Ω, sync negative

C: 0.286 Vp-p, 75 Ω (at burst level)

VIDEO (DIGITAL)

SDI: BNC (1) (\*2) \*Using optional DSBK-1501

Conforms to Serial Digital Interface (270

Mb/s), SMPTE 259M

SDTI (QSDI): BNC (1) (\*2) \*using optional

DSBK-1501

Conforms to SDTI (270 Mb/s), SMPTE

305M/322M

i.LINK (DV): 6-pin (1)

IEEE 1394-based

AUDIO (ANALOG)

Audio: XLR 3-pin female (2) \*Using optional

DSBK-1504

-6/0/+4 dBu (selectable by menu), high

impedance

AUDIO (DIGITAL)

AES/EBU: BNC (2) \*Using optional DSBK-1501

75 Ω, unbalanced

Time Code

BNC (1), 0.5 Vp-p to 18.0 Vp-p, 3 kΩ

unbalanced

Output Signals

VIDEO (ANALOG)

Video 1/2/3(SUPER): BNC (3) (\*3)

Composite, 1.0 Vp-p, 75 Ω, sync negative

Component: BNC (3) (\*3)

Y: 1.0 Vp-p, 75 Ω, sync negative

R-Y: 0.7 Vp-p, 75 Ω (75%)

B-Y: 0.7 Vp-p, 75 Ω (75%)

S-Video: BNC (2) (\*3)

Y: 1.0 Vp-p, 75 Ω, sync negative

C: 0.286 Vp-p, 75 Ω (at burst level)

VIDEO (DIGITAL)

SDI: BNC (2) (\*4) \*Using optional DSBK-1501

Conforms to Serial Digital Interface (270

Mb/s), SMPTE259M

SDTI (QSDI): BNC (2) (\*4) \*Using optional

DSBK-1501

Conforms to SDTI (270 Mb/s), SMPTE

305M/322M

i.LINK (DV): 6-pin (1)

IEEE 1394-based

AUDIO (ANALOG)

Audio: XLR 3-pin male (2)

-6/0/+4 dBu (selectable by menu)

Monitor: RCA (1) (\*5)

- ∞ to -11 dBu, 47kΩ, unbalanced (-20

dBFS)

Headphone: JM-60 headphone jack (1)

- ∞ to -13 dBu, 8Ω, unbalanced (-20 dBFS)

AUDIO (DIGITAL):

BNC (2), AES/EBU, 75 Ω, unbalanced \*Using

optional DSBK-1501

TIME CODE:

BNC (1), 2.2 Vp-p, 75 Ω, unbalanced

REMOTE

RS-422A: D-sub 9-pin, female (1)

Control-S (SIRCS): Stereo mini jack (1)

(\*1): Video, Component and S-Video inputs share the same BNC connectors. (\*2): SDI and SDTI (QSDI) inputs share the same BNC connectors. (\*3): Video, Component and S-Video outputs share the same BNC connectors. (\*4): SDI and SDTI (QSDI) outputs share the same BNC connectors. (\*5): The volume of monitor can be controlled by the PHONE LEVEL control knob.

## DVCAM VTRs

# DSR-1500AP Editing Recorder

### Features

- Compact, half-rack size
- Superb picture quality of the DVCAM format
- Playback compatibility with DV (25 Mb/s) family formats including consumer DV (SP mode) and DVCPRO without a mechanical adaptor(\*)
- DV format recording capability (SP mode, 10- $\mu$ m track pitch recording) (\*\*)
- Long recording time: max. 184 min (DVCAM mode)/276 min (DV SP mode) with a standard-size cassette, and max. 40 min (DVCAM mode)/60 min (DV SP mode) with a mini cassette
- Versatile digital interfaces: equipped with i.LINK (DV), and optional SDI, SDTI (QSDI) and AES/EBU interfaces
- Extensive range of analog interfaces: composite, component, S-video and two channels of XLR audio
- Variable speed playback within the range of -0.5 to +0.5 times normal play speed
- High-speed color picture search: 60 times normal play speed in both forward and reverse
- Menu keys on front panel for frame by frame picture search
- RS-422A remote control interface
- Excellent jog audio quality
- ClipLink operation
- Full tape dubbing including ClipLink Log Data using SDTI (QSDI) and RS-422A interfaces
- 16:9 aspect ID signal recording
- Video process control for both analog and digital outputs
- TC and VITC
- Built-in signal generator
- Universal powering system: allows the use of AC100 V to 240 V power sources
- Three-size cassette compartment to ensure compatibility with DV(25Mb/s) recorded tapes of all size and types
- Closed caption function

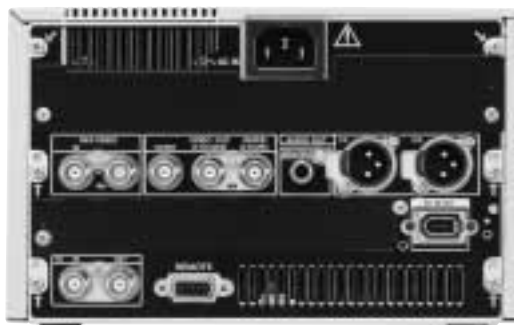
(\*) SDTI (QSDI) interface does not support DVCPRO playback. (\*\*) Assemble or insert editing is not possible.

### Supplied Accessories

AC Power cord (1)  
Operating instructions (1)

### Optional Accessories

DSBK-1501 Digital Input/Output Board  
DSBK-1504P Analog Input Board  
DSRM-10 Remote Control Unit  
RCC-G Cables 9-pin/9-pin Cable  
CCF-L Cables DV Cables (6-pin to 6-pin)  
CCFD-L Cables DV Cables (6-pin to 4-pin)  
PDV-MEM tapes Digital Videocassette Tapes (Master Tape)  
PDV-N tapes Digital Videocassette Tapes (Non IC type)  
PDV-CL tapes Video Head Cleaning Cassette Tapes (for DVCAM)  
PDV-ME tapes Digital Videocassette Tapes



DVCAM VTRs

Specifications

General

Power requirements:

AC 100 V to 240 V, 50/60 Hz

Power consumption:

55 W (with all options)

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

-20 °C to 60 °C (-4 °F to 140 °F)

Operating humidity:

Less than 80%

Storage humidity:

Less than 90%

Mass:

6 kg (13 lb 3 oz)

Dimensions (W x H x D):

210 x 130 x 420 mm (8 3/8 x 5 1/8 x 16 5/8 inches)

Tape speed:

28.221 mm/s

Recording/Playback time

DVCAM mode:

Standard size: 184 min. with

PDV-184ME/184N/184MEM

Mini size: 40 min. with

PDVM-40ME/40N/40MEM

DV (SP) mode:

Standard size: 276 min. with

PDV-184ME/184N/184MEM

Mini size: 60 min. with

PDVM-40ME/40N/40MEM

Fast forward/Rewind time

Standard size: Less than 3 min. with

PDV-184ME/184N/184MEM

Mini size: Less than 1 min. with

PDVM-40ME/40N/40MEM

Search speed

Shuttle mode: Still to ±60 times normal speed

Digital slow mode: ±0.5 times normal speed

Video Performance

Bandwidth (via analog component I/O)

Luminance: 25 Hz to 5.0 MHz +1.0/-1.5 dB

Chrominance: 25 Hz to 2.0 MHz +1.0/-2.0 dB

S/N ratio (via analog component I/O):

More than 55 dB

K-factor (K2T, KPB):

Less than 2%

Y/C delay:

Less than 30 ns

Audio Performance

Frequency response

2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz

±1.0 dB

4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz

±1.0 dB

Dynamic range:

More than 87 dB

Distortion (THD + N):

Less than 0.07%

Input Signals

VIDEO (ANALOG)

REF. Video: BNC (2), loop-through connection

0.3 Vp-p, 75 Ω sync negative

Composite Video: BNC (2), loop-through

connection(\*1) \*Using optional DSBK-1504

1.0 Vp-p, 75 Ω, sync negative

Component: BNC (3) (\*1) \*Using optional

DSBK-1504

Y: 1.0 Vp-p, 75 Ω, sync negative

R-Y: 0.7 Vp-p, 75 Ω (100%)

B-Y: 0.7 Vp-p, 75 Ω (100%)

S-Video: BNC (2) (\*1) \*Using optional

DSBK-1504

Y: 1.0 Vp-p, 75 Ω, sync negative

C: 0.3 Vp-p, 75 Ω (at burst level)

VIDEO (DIGITAL)

SDI: BNC (1) (\*2) \*Using optional DSBK-1501

Conforms to Serial Digital Interface (270

Mb/s), ITU-R BT.656

SDTI (QSDI): BNC (1) (\*2) \*using optional

DSBK-1501

Conforms to SDTI (270 Mb/s), SMPTE

305M/322M

i.LINK (DV): 6-pin (1)

IEEE 1394-based

AUDIO (ANALOG)

Audio: XLR 3-pin female (2) \*Using optional

DSBK-1504

-6/-3/0/+4 dBu (selectable by menu), high

impedance

AUDIO (DIGITAL)

AES/EBU: BNC (2) \*Using optional DSBK-1501

75 Ω, unbalanced

Time Code

BNC (1), 0.5 Vp-p to 18.0 Vp-p, 3 kΩ

unbalanced

Output Signals

VIDEO (ANALOG)

Video 1/2/3(SUPER): BNC (3) (\*3)

Composite, 1.0 Vp-p, 75 Ω, sync negative

Component: BNC (3) (\*3)

Y: 1.0 Vp-p, 75 Ω, sync negative

R-Y: 0.7 Vp-p, 75 Ω (100%)

B-Y: 0.7 Vp-p, 75 Ω (100%)

S-Video: BNC (2) (\*3)

Y: 1.0 Vp-p, 75 Ω, sync negative

C: 0.3 Vp-p, 75 Ω (at burst level)

VIDEO (DIGITAL)

SDI: BNC (2) (\*4) \*Using optional DSBK-1501

Conforms to Serial Digital Interface (270

Mb/s), ITU-R BT.656

SDTI (QSDI): BNC (2) (\*4) \*Using optional

DSBK-1501

Conforms to SDTI (270 Mb/s), SMPTE

305M/322M

i.LINK (DV): 6-pin (1)

IEEE 1394-based

AUDIO (ANALOG)

Audio: XLR 3-pin male (2)

-6/-3/0/+4 dBu (selectable by menu)

Monitor: RCA (1) (\*5)

- ∞ to -9 dBu, 47kΩ, unbalanced (-18

dBFS)

Headphone: JM-60 headphone jack (1)

- ∞ to -11 dBu, 8Ω, unbalanced (-18 dBFS)

AUDIO (DIGITAL):

BNC (2), AES/EBU, 75 Ω, unbalanced \*Using

optional DSBK-1501

TIME CODE:

BNC (1), 2.2 Vp-p, 75 Ω, unbalanced

REMOTE

RS-422A: D-sub 9-pin, female (1)

Control-S (SIRCS): Stereo mini jack (1)

(\*1): Video, Component and S-Video inputs share the same BNC connectors. (\*2): SDI and SDTI (QSDI) inputs share the same BNC connectors. (\*3): Video, Component and S-Video outputs share the same BNC connectors. (\*4): SDI and SDTI (QSDI) outputs share the same BNC connectors. (\*5): The volume of monitor can be controlled by the PHONE LEVEL control knob.

## DVCAM VTRs

# DSR-50 Portable Recorder

### Features

- Superb picture quality of the DVCAM format
- Playback and Recording capability of DV recorded tapes (SP mode only)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Four-channel independent digital audio recording
- 2.5-inch (200,000 dot) color LCD monitor
- Duplication options (tape copy, tape copy with original time code, or tape copy with cassette memory data)
- Compact & lightweight design: 3.9 kg (8 lb 9 oz) without battery and tape
- Playback capability of both NTSC and PAL recorded tapes(\*)
- i.LINK (DV) interface providing a single cable connection to simultaneously transfer audio, video and command signals
- 26-pin Camera Connector
- Analog Component Output
- Timecode IN/OUT

(\*) The output signal level is not standard and therefore recommended for simple monitoring only, with a monitor of the same color system as the original source.



### Supplied Accessories

- LCD Protection Cover (1)
- Cleaning Cassette (1)

### Optional Accessories

- AC-550 AC Adaptor
- BP-L40A Rechargeable Lithium-ion Battery Pack
- BP-L60A Rechargeable Lithium-ion Battery Pack
- BP-L90A Rechargeable Lithium-ion Battery Pack
- BC-L50 Lithium-ion Battery Charger
- BC-L120 Lithium-ion Battery Charger
- DSRM-10 Remote Control Unit
- DSRM-20 Remote Control Unit
- FS-20 Foot switch
- VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)
- VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)
- CCF-L Cables DV Cables (6-pin to 6-pin)
- CCFD-L Cables DV Cables (6-pin to 4-pin)
- CCZ cables 26-pin/26-pin Camera Cable

### Specifications

#### General

- DC input
  - XLR 4-pin (male), +12 V
- Power consumption
  - 15 W
- Operating temperature
  - 5 to 40 °C (41 to 104 °F)
- Storage temperature
  - 20 to 60 °C (-4 to 140 °F)
- Tape speed
  - Approx. 28.2 mm/sec (DVCAM mode),
  - Approx. 18.8 mm/sec (DV SP mode)
- Recording/Playback time
  - 184 minutes (DVCAM mode), 270 minutes (DV SP mode) with PDV-184ME cassette
  - 40 minutes (DVCAM mode), 60 minutes (DV SP mode) with PDVM-40ME cassette
- Mass
  - 3.9 kg (8 lb 9 oz), excluding battery and tape

### Dimensions

- 247 (W) x 92.5 (H) x 311 (D) mm (9 3/4 x 3 3/4 x 12 1/4 inches), excluding projections
- 279 (W) x 99 (H) x 315 (D) mm (11 x 4 x 12 1/2 inches), including projections

### Video Performance

- Rec mode
  - DVCAM/DV (SP mode only)
- PB mode
  - DVCAM/DV (SP mode only)

### Audio Performance

- Rec mode
  - 48.0 kHz: 16 bit: 2ch / 32.0 kHz: 12 bit:
  - 4ch / automatic (DV IN)
- PB mode
  - 48.0 kHz: 16 bit: 2ch / 32.0 kHz: 12 bit:
  - 4ch /
  - 32.0 kHz: 16 bit: 2ch / 44.1 kHz: 16 bit:
  - 2ch (automatically selected)

### Input terminals

- Video (Analog)
  - Reference: BNC (1), Black Burst 75  $\Omega$ , Sync negative (use Video IN)
  - Composite Video: BNC (1), 1.0 Vp-p, 75  $\Omega$ , Sync negative
  - S-Video: 4-pin mini DIN (1)
    - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - C: 0.286 Vp-p (subcarrier burst) 75  $\Omega$
- Audio IN (Analog)
  - Audio: XLR 3-pin, female (4) (+4 dBu/-20 dBu/-60 dBu), impedance more than 3 k $\Omega$
  - with +48 V phantom power supply (independently switched for each channel)

### Camera IN:

- 26-pin camera connector (1)
  - Composite: 1.0 Vp-p, 75  $\Omega$ , Sync negative
  - Component
    - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - B-Y: 0.7 Vp-p, 75  $\Omega$ , R-Y: 0.7 Vp-p, 75  $\Omega$

### DV:

- 6-pin (with lock) \*shared with DV OUT connector
- Timecode:
  - BNC (1), 0.5 to 18 Vp-p

### Output terminals

- Video (Analog)
  - Video OUT 1 (Monitor): Composite, BNC (1)
    - 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - Superimpose On/Off
  - Video OUT 2: Composite, BNC (1)
    - 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - S-Video, 4-pin mini DIN (1)
      - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
      - C: 0.286 Vp-p (subcarrier burst) 75  $\Omega$
  - Component OUT: BNC (3)
    - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - B-Y/R-Y: 0.7 Vp-p, 75  $\Omega$
- Audio (Analog)
  - RCA pin: (4), -10 dBu, Standard output level -20 dB from full bit
  - RCA pin (Monitor): (1)
- DV:
  - 6-pin (with lock) \*shared with DV IN connector
- Timecode:
  - BNC (1), 2.2 Vp-p, 600 ohms / 1.2 Vp-p, 75  $\Omega$
- Remote
  - Control S: Stereo mini jack (1)
  - Remote: Stereo mini jack (1) (Edge High / Edge Low / Level High / Level Low) (Tally)
  - Control: Stereo minimini jack (compatible with LANC as a player)
  - Headphone jack (left side): Stereo standard jack (1)
    - 19 dBu, with Level Control
- Other
  - Color LCD monitor:
    - 2.5 inch, 200,000 dots

## DVCAM VTRs

# DSR-50P Portable Recorder

### Features

- Superb picture quality of the DVCAM format
- Playback and Recording capability of DV recorded tapes (SP mode only)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Four-channel independent digital audio recording
- 2.5-inch (200,000 dot) color LCD monitor
- Duplication options (tape copy, tape copy with original time code, or tape copy with cassette memory data)
- Compact & lightweight design: 3.9 kg (8 lb 9 oz) without battery and tape
- Playback capability of both NTSC and PAL recorded tapes(\*)
- i.LINK (DV) interface providing a single cable connection to simultaneously transfer audio, video and command signals
- 26-pin Camera Connector
- Analog Component Output
- Timecode IN/OUT

(\*) The output signal level is not standard and therefore recommended for simple monitoring only, with a monitor of the same color system as the original source.



### Supplied Accessories

- LCD Protection Cover (1)
- Cleaning Cassette (1)

### Optional Accessories

- AC-550CE AC Adaptor
- BP-L40A Rechargeable Lithium-ion Battery Pack
- BP-L60A Rechargeable Lithium-ion Battery Pack
- BP-L90A Rechargeable Lithium-ion Battery Pack
- BC-L50 Lithium-ion Battery Charger
- BC-L120 Lithium-ion Battery Charger
- DSRM-10 Remote Control Unit
- DSRM-20 Remote Control Unit
- FS-20 Foot switch
- VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)
- VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)
- CCF-L Cables DV Cables (6-pin to 6-pin)
- CCFD-L Cables DV Cables (6-pin to 4-pin)
- CCZ cables 26-pin/26-pin Camera Cable

### Specifications

#### General

- DC input
  - XLR 4-pin (male), +12 V
- Power consumption
  - 15 W
- Operating temperature
  - 5 to 40 °C (41 to 104 °F)
- Storage temperature
  - 20 to 60 °C (-4 to 140 °F)
- Tape speed
  - Approx. 28.2 mm/sec (DVCAM mode),
  - Approx. 18.8 mm/sec (DV SP mode)
- Recording/Playback time
  - 184 minutes (DVCAM mode), 270 minutes (DV SP mode) with PDV-184ME cassette
  - 40 minutes (DVCAM mode), 60 minutes (DV SP mode) with PDVM-40ME cassette
- Mass
  - 3.9 kg (8 lb 9 oz), excluding battery and tape

### Dimensions

- 247 (W) x 92.5 (H) x 311 (D) mm (9 3/4 x 3 3/4 x 12 1/4 inches), excluding projections
- 279 (W) x 99 (H) x 315 (D) mm (11 x 4 x 12 1/2 inches), including projections

### Video Performance

- Rec mode
  - DVCAM/DV (SP mode only)
- PB mode
  - DVCAM/DV (SP mode only)

### Audio Performance

- Rec mode
  - 48.0 kHz: 16 bit: 2ch / 32.0 kHz: 12 bit:
  - 4ch / automatic (DV IN)
- PB mode
  - 48.0 kHz: 16 bit: 2ch / 32.0 kHz: 12 bit:
  - 4ch /
  - 32.0 kHz: 16 bit: 2ch / 44.1 kHz: 16 bit:
  - 2ch (automatically selected)

### Input terminals

- Video (Analog)
  - Reference: BNC (1), Black Burst 75  $\Omega$ , Sync negative (use Video IN)
  - Composite Video: BNC (1), 1.0 Vp-p, 75  $\Omega$ , Sync negative
  - S-Video: 4-pin mini DIN (1)
    - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - C: 0.3 Vp-p (subcarrier burst) 75  $\Omega$
- Audio IN (Analog)
  - Audio: XLR 3-pin, female (4) (+4 dBu/-20 dBu/-60 dBu), impedance more than 3 k $\Omega$
  - with +48 V phantom power supply (independently switched for each channel)

### Camera IN:

- 26-pin camera connector (1)
  - Composite: 1.0 Vp-p, 75  $\Omega$ , Sync negative
  - Component
    - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - B-Y: 0.7 Vp-p, 75  $\Omega$ , R-Y: 0.7 Vp-p, 75  $\Omega$

### DV:

- 6-pin (with lock) \*shared with DV OUT connector
- Timecode:
  - BNC (1), 0.5 to 18 Vp-p

### Output terminals

- Video (Analog)
  - Video OUT 1 (Monitor): Composite, BNC (1)
    - 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - Superimpose On/Off
  - Video OUT 2: Composite, BNC (1)
    - 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - S-Video, 4-pin mini DIN (1)
      - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
      - C: 0.3 Vp-p (subcarrier burst) 75  $\Omega$
  - Component OUT: BNC (3)
    - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
    - B-Y/R-Y: 0.7 Vp-p, 75  $\Omega$
- Audio (Analog)
  - RCA pin: (4), -10 dBu, Standard output level -18 dB from full bit
  - RCA pin (Monitor): (1)
- DV:
  - 6-pin (with lock) \*shared with DV IN connector
- Timecode:
  - BNC (1), 2.2 Vp-p, 600 ohms / 1.2 Vp-p, 75  $\Omega$
- Remote
  - Control S: Stereo mini jack (1)
  - Remote: Stereo mini jack (1) (Edge High / Edge Low / Level High / Level Low) (Tally)
  - Control: Stereo minimini jack (compatible with LANC as a player)
  - Headphone jack (left side): Stereo standard jack (1)
    - 19 dBu, with Level Control
- Other
  - Color LCD monitor:
    - 2.5 inch, 200,000 dots

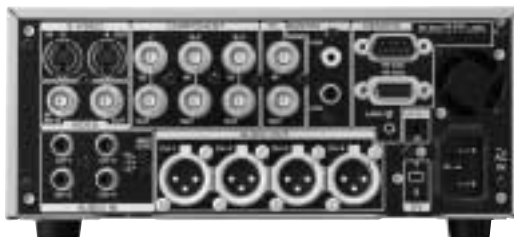
## DVCAM VTRs

### DSR-45 Recorder

#### Features

●Superb picture quality of the DVCAM format ●Recording and playback capability of the DV format (SP mode only)(\*1) ●Long recording time: up to 184 minutes with a standard-size cassette, 40 minutes with a mini-size cassette in DVCAM mode ●Full range of analog Video IN/OUT: component, composite, S-video ●Four channel independent Audio In/OUT with XLR connectors for Audio OUT ●i.LINK(DV) interface for simultaneous transfer of audio, video, and command signals ●RS-422A remote control interface(\*2) ●RS-232C interface for basic control from a PC ●LANC and Control S interface ●Time code IN/OUT ●Time code/User bit preset ●Time code IN through DV IN ●Duplication function (Including the duplication of cassette memory data) ●Compact size (half-rack size width, 2U height) ●Low power consumption (22 W during playback) ●Built-in 2-inch type (123,200 dot) color LCD monitor ●Tape counter ●Wireless remote controller RMT-DS5 supplied

(\*1) When recording in DV(SP) format, the transition between cut to cut may not be smooth. In addition, when the recording format is switched between DVCAM and DV, the transition may not be recorded smoothly. (\*2) The DSR-45/45P is not equipped with the synchronization capability, therefore, is recommended to be used only as a source feeder in A/B roll editing.



#### Supplied Accessories

Cleaning cassette (1)  
RMT-DS5 wireless remote controller (1)  
Size AA (R6) battery for remote controller (2)  
Operating instructions (1)  
Interface manual for programmers (RS-232C) (1)  
AC power cord (1)

#### Optional Accessories

VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
DSRM-20 Remote Control Unit

#### Specifications

##### General

**System**  
EIA standards, NTSC color  
**Power requirements:**  
AC 100 V to 240 V, 50/60 Hz  
**Power consumption:**  
22 W  
**Operating temperature:**  
5 °C to 40 °C (41 °F to 104 °F)  
**Storage temperature:**  
-20 °C to 60 °C (-4 °F to 140 °F)  
**Mass:**  
Approx. 4.6 kg (10 lb 2 oz)  
**Dimensions:**  
212 (W) × 98 (H) × 392.8 (D) mm  
(8 3/8 × 3 7/8 × 15 1/2 inches)  
**Tape speed**  
DVCAM mode: 28.2 mm/s  
DV SP playback mode: 18.8 mm/s  
**Recording/Playback time in DVCAM mode:**  
Standard size: 184 min. with  
PDV-184ME/184N/184MEM  
Mini size: 40 min. with  
PDVM-40ME/40N/40MEM

#### Tape rewind time:

Less than 2 min. with  
PDV-184ME/184N/184MEM  
**Search speed (via DSRM-20 or RMT-DS5):**  
± x1/10, x1/3, x1, x2, x9, x14 (DVCAM)  
± x1/10, x1/3, x1, x2, x9, x24 (DV SP)

#### Signal Inputs

##### Video (Analog)

Ref.Video: BNC (1)  
Black burst: 75 Ω, sync negative  
Composite: BNC (1)(\*1)  
1.0 Vp-p, 75 Ω, unbalanced, sync negative  
S-Video: Mini DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.286 Vp-p (subcarrier), 75 Ω  
Component: BNC (3)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
R-Y/B-Y: 0.7 Vp-p, 75 Ω (with 75% color bar)

##### Audio (Analog)

Audio: Pin jack (4)  
-10/-2/+4 dBu (full bits -20dB)

#### Signal outputs

##### Video (Analog)

Composite: BNC (1)  
1.0 Vp-p, 75 Ω, unbalanced, sync negative  
S-Video: Mini DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative  
C: 0.286 Vp-p (subcarrier), 75 Ω, unbalanced  
Component: BNC (3)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
R-Y/B-Y: 0.7 Vp-p (with 75% color bar)  
Monitor: Pin jack (1)  
Composite, 1.0 Vp-p, 75 Ω, sync negative

##### Audio (Analog)

Audio: XLR 3-pin male (4)  
+4 dBu (full bits -20dB)(\*2)

Monitor: Pin jack (1)  
2 Vrms (maximum)

#### Digital Input/Output

i.LINK (DV): 4-pin (1), IEEE1394

#### Others

RS-422A: D-sub 9-pin, female (1)  
RS-232C: D-sub 9-pin, male (1)  
LANC: Stereo mini-mini jack (1)  
Control S (SIRCS) IN: Stereo mini jack (1)  
Headphone: Stereo mini jack (1)

(\*1) Shared with REF IN (\*2) The audio output level of the DSR-45 will be reduced by half when connected to an Unbalanced XLR input device.

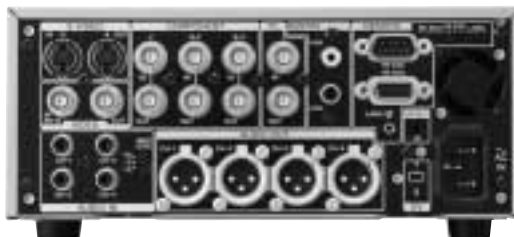
## DVCAM VTRs

### DSR-45P Recorder

#### Features

●Superb picture quality of the DVCAM format ●Recording and playback capability of the DV format (SP mode only)(\*1) ●Long recording time: up to 184 minutes with a standard-size cassette, 40 minutes with a mini-size cassette in DVCAM mode ●Full range of analog Video IN/OUT: component, composite, S-video ●Four channel independent Audio In/OUT with XLR connectors for Audio OUT ●i.LINK(DV) interface for simultaneous transfer of audio, video, and command signals ●RS-422A remote control interface(\*2) ●RS-232C interface for basic control from a PC ●LANC and Control S interface ●Time code IN/OUT ●Time code/User bit preset ●Time code IN through DV IN ●Duplication function (Including the duplication of cassette memory data) ●Compact size (half-rack size width, 2U height) ●Low power consumption (22 W during playback) ●Built-in 2-inch type (123,200 dot) color LCD monitor ●Tape counter ●Wireless remote controller RMT-DS5 supplied

(\*1) When recording in DV(SP) format, the transition between cut to cut may not be smooth. In addition, when the recording format is switched between DVCAM and DV, the transition may not be recorded smoothly. (\*2) The DSR-45/45P is not equipped with the synchronization capability, therefore, is recommended to be used only as a source feeder in A/B roll editing.



#### Supplied Accessories

Cleaning cassette (1)  
RMT-DS5 wireless remote controller (1)  
Size AA (R6) battery for remote controller (2)  
Operating instructions (1)  
Interface manual for programmers (RS-232C) (1)  
AC power cord (1)

#### Optional Accessories

VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
DSRM-20 Remote Control Unit

#### Specifications

##### General

##### System

PAL

##### Power requirements:

AC 100 V to 240 V, 50/60 Hz

##### Power consumption:

22 W

##### Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

##### Storage temperature:

-20 °C to 60 °C (-4 °F to 140 °F)

##### Mass:

Approx. 4.6 kg (10 lb 2 oz)

##### Dimensions:

212 (W) × 98 (H) × 392.8 (D) mm  
(8 3/8 × 3 7/8 × 15 1/2 inches)

##### Tape speed

DVCAM mode: 28.2 mm/s

DV SP playback mode: 18.8 mm/s

##### Recording/Playback time in DVCAM mode:

Standard size: 184 min. with

PDV-184ME/184N/184MEM

Mini size: 40 min. with

PDVM-40ME/40N/40MEM

##### Tape rewind time:

Less than 2 min. with

PDV-184ME/184N/184MEM

##### Search speed (via DSRM-20 or RMT-DS5):

± x1/10, x1/3, x1, x2, x11, x17 (DVCAM)

± x1/10, x1/3, x1, x2, x11, x24 (DV SP)

##### Signal Inputs

##### Video (Analog)

Ref.Video: BNC (1)

Black burst: 75 Ω, sync negative

Composite: BNC (1)(\*1)

1.0 Vp-p, 75 Ω, unbalanced, sync negative

S-Video: Mini DIN 4-pin (1)

Y: 1.0 Vp-p, 75 Ω, sync negative

C: 0.3 Vp-p (subcarrier), 75 Ω

Component: BNC (3)

Y: 1.0 Vp-p, 75 Ω, sync negative

R-Y/B-Y: 0.7 Vp-p, 75 Ω (with 100% color bar)

##### Audio (Analog)

Audio: Pin jack (4)

-10/-2/+4 dBu (full bits -18 dB)

##### Signal outputs

##### Video (Analog)

Composite: BNC (1)

1.0 Vp-p, 75 Ω, unbalanced, sync negative

S-Video: Mini DIN 4-pin (1)

Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative

C: 0.3 Vp-p (subcarrier), 75 Ω, unbalanced

Component: BNC (3)

Y: 1.0 Vp-p, 75 Ω, sync negative

R-Y/B-Y: 0.7 Vp-p (with 100% color bar)

Monitor: Pin jack (1)

Composite, 1.0 Vp-p, 75 Ω, sync negative

##### Audio (Analog)

Audio: XLR 3-pin male (4)

+4 dBu (full bits -20dB)(\*2)

Monitor: Pin jack (1)

2 Vrms (maximum)

##### Digital Input/Output

i.LINK (DV): 4-pin (1), IEEE1394

##### Others

RS-422A: D-sub 9-pin, female (1)

RS-232C: D-sub 9-pin, male (1)

LANC: Stereo mini-mini jack (1)

Control S (SIRCS) IN: Stereo mini jack (1)

Headphone: Stereo mini jack (1)

(\*1) Shared with REF IN (\*2) The audio output level of the DSR-45 will be reduced by half when connected to an Unbalanced XLR input device.

## DVCAM VTRs

# DSR-25 Recorder

### Features

- Superb picture quality of the DVCAM format
- Recording and playback capability of DV recorded tapes (SP mode only)(\*1)
- Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette in DVCAM mode
- Recording and playback capability of both NTSC/PAL signals(\*2)
- i.LINK (DV) interface for simultaneous transfer of audio, video, and command signals
- LANC and control S interface
- Time code/ User bit preset
- Time code IN through DV IN
- Duplication function (Including the duplication of cassette memory data)
- Power-on recording and playback capabilities
- Compact size (half-rack size width, 2U height)
- Low power consumption (16 W during playback)
- Built-in 2-inch type (123,200 dot) color LCD monitor
- Tape counter
- Wireless remote controller RMT-DS5 supplied

(\*1) When recording in DV (SP) format, the transition between cut to cut may not be smooth. In addition, when the recording format is switched between DVCAM and DV, the transition may not be recorded smoothly. (\*2) The DSR-25 is not equipped to convert signals from NTSC to PAL, or vice versa.



### Supplied Accessories

Cleaning cassette (1)  
RMT-DS5 wireless remote controller (1)  
Size AA (R6) battery for remote controller (2)  
Operating instructions (1)  
AC power cord (1)

### Optional Accessories

VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
DSRM-20 Remote Control Unit

### Specifications

#### General

Video signal standard:  
NTSC/PAL Switchable  
Power requirements:  
AC 100 V to 240 V, 50/60 Hz  
Power consumption:  
16 W  
Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)  
Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)  
Mass:  
Approx. 4.3 kg (9 lb 8 oz)  
Dimensions:  
212 (W) × 98 (H) × 392.8 (D) mm  
(8 3/8 × 3 7/8 × 15 1/2 inches)  
(Including external projections)  
Tape speed:  
DVCAM mode: 28.2 mm/s  
DV SP playback mode: 18.8 mm/s  
Recording/Playback time in DVCAM mode:  
Standard size: 184 min. with  
PDV-184ME/184N/184MEM  
Mini size: 40 min. with  
PDVM-40ME/40N/40MEM  
Tape rewind time:  
Less than 2 min. with  
PDV-184ME/184N/184MEM

Search speed (via RMT-DS5 or DSRM-20):

± x 1/10, x 1/3, x 1, x 2, x 9, x 14 (DVCAM NTSC)  
± x 1/10, x 1/3, x 1, x 2, x 9, x 24 (DV SP NTSC)  
± x 1/10, x 1/3, x 1, x 2, x 11, x 17 (DVCAM PAL)  
± x 1/10, x 1/3, x 1, x 2, x 11, x 24 (DV SP PAL)

#### Signal Inputs

Video (ANALOG)

Composite VIDEO: BNC (1)  
1.0 Vp-p, 75 Ω, sync negative  
S-Video: Mini DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.286 Vp-p (NTSC mode) (subcarrier), 75 Ω  
C: 0.3 Vp-p (PAL mode) (subcarrier), 75 Ω

Video (DIGITAL)

i.LINK (DV): 4-pin (1), IEEE1394

Audio (ANALOG)

Pin jack (L/R) (1): -10/-2/+4 dBu (full bits -20dB)

#### Signal outputs

Video (ANALOG)

Composite VIDEO: BNC (1)  
1.0 Vp-p, 75 Ω, sync negative  
S-Video: Mini DIN 4-pin (1)  
Y: 1.0 Vp-p, 75 Ω, sync negative  
C: 0.286 Vp-p (NTSC mode) (subcarrier), 75 Ω  
C: 0.3 Vp-p (PAL mode) (subcarrier), 75 Ω

Video (DIGITAL)

i.LINK (DV): 4-pin (1), IEEE1394

Audio (ANALOG)

Pin jack (L/R) (1), 2 Vrms (full bits)

OTHERS

LANC: Stereo mini-mini jack (1)

Control S (SIRCS) In: Stereo mini jack (1)

Headphone jack: Stereo mini jack (1)

## DVCAM VTRs

# DSR-11 Recorder

### Features

- Superb picture quality of the DVCAM format ●Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette
- Recording and playback of DV format tapes (SP mode only) ●NTSC/PAL compatible\*1 ●Composite and S Video inputs ●i.LINK (DV) interface providing a single cable connection to simultaneously transfer audio, video and command signals ●Unique design enables both horizontal and vertical installation ●LANC and Control S terminals ●Auto repeat function ●DC power operation ●Supplied RMT-DS11 Wireless Remote Commander

\*1 The DSR-11 does not convert signals from NTSC to PAL, or vice versa.



### Supplied Accessories

- AC Adaptor (1)
- Power Cord (1)
- RMT-DS11 Wireless Remote Commander (1)
- Size AA(R6) Batteries for Remote (2)
- Stand (1)
- Cleaning Cassette (1)
- Operation Manual (1)

### Optional Accessories

- DSRM-10 Remote Control Unit
- DSRM-20 Remote Control Unit
- CCFD-L Cables DV Cables (6-pin to 4-pin)
- VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)
- VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)

### Specifications

#### General

- System:
  - NTSC/PAL switchable
- DC input:
  - DC jack type 4 x 1 (12 V)
- Power consumption:
  - 15 W
- Operating temperature:
  - 5 to 40 °C (41 to 104 °F)
- Storage temperature:
  - 20 to 60 °C (-4 to 140 °F)
- Tape speed:
  - 28.221 mm/s (DVCAM mode), 18.831 mm/s (DV SP mode)
- Recording/Playback time:
  - 184 minutes (DVCAM mode),
  - 270 minutes (DV SP mode) with PDV-184ME cassette
  - 40 minutes (DVCAM mode),
  - 60 minutes (DV SP mode) with PDVM-40ME cassette
- Mass Dimensions Video:
  - 2.8 kg (6 lb 2 oz)
  - 180 (W) x 69 (H) x 258.4 (D) mm
  - (7 1/8 x 2 3/4 x 10 1/4 inches), excluding projections

#### Video

- Rec Mode:
  - DVCAM/DV (SP mode only)
- PB Mode:
  - DVCAM/DV (SP mode only)

#### Audio

- Rec Mode:
  - 48 kHz: 16 bit: 2ch/32 kHz:12 bit: 4ch/automatic (DV IN)
- PB Mode:
  - 48 kHz: 16 bit: 2ch/32 kHz:12 bit: 4ch/32 kHz:16 bit: 2ch
  - 44.1kHz:16 bit: 2ch (automatically selected)

#### Input/Output connectors

##### Video IN

- Composite: RCA pin
  - 1.0 Vp-p, 75  $\Omega$ , Sync negative
- S Video: 4-pin mini DIN
  - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
  - C: 0.286 Vp-p (NTSC) 0.3 Vp-p (PAL) (subcarrier burst), 75  $\Omega$

##### Audio IN:

- RCA pin x 2 (L, R)
  - Input level: 2 V rms (full bit) Input
  - impedance: more than 47 k $\Omega$

##### Video OUT

- Composite:RCA pin
  - 1.0 Vp-p, 75  $\Omega$ , Sync negative
- S Video: 4-pin mini DIN
  - Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative
  - C: 0.286 Vp-p (NTSC) 0.3 Vp-p (PAL) (subcarrier burst), 75  $\Omega$

##### Audio OUT:

- RCA pin x 2 (L, R)
  - Output level: 2 V rms (full bit) Output
  - impedance: less than 10 k $\Omega$

##### DV IN/OUT:

- 4-pin
- Control S:
  - Stereo mini jack

##### LANC:

- Stereo minimini jack

HDV VTRs

HVR-M10N ..... 398  
HVR-M10P ..... 399

## HDV VTRs

# HVR-M10N HDV 1080i VTR

The HVR-M10N is a compact and cost-effective HDV 1080i VTR. (E32 (NTSC) area)

### Features

- Adopts HDV 1080i specification of the HDV format that features 1080 effective scanning lines and 1440 horizontal pixels
- Compatible with existing DV tape and new high-grade mini cassette tape; DigitalMaster PHDVM-63DM
- Long recording time of 63 minutes on a mini cassette tape such as the DigitalMaster
- Switchable recording and playback; HDV 1080i/DVCAM/DV and 60i/50i
- Down-conversion playback from 1080i down to 480i, 576i, 480p and 576p
- Aspect ratio conversion from 16:9 to 4:3
- i.LINK interface
- Compact, unique design - can be placed vertically or horizontally
- Built-in, 3.5-inch (\*1) type 16:9 widescreen color LCD monitor
- Status check function for easy confirmation of various parameters including menu settings, mode of operation, time code and audio level
- 2-channel independent audio record level control with audio level meter
- Time code preset
- External control by the supplied wireless Remote Commander unit
- Battery Operation
- Noiseless design, with no cooling fan
- (\*1) Viewable area measured diagonally



### Supplied Accessories

Wireless Remote Commander (1)  
AC adaptor (1)  
Power code (1)  
Stand (1)  
Size AA batteries (2)  
Cleaning cassette (1)  
Operating instructions (1)

### Optional Accessories

VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
NP-F570 InfoLITHIUM Rechargeable Battery Pack  
NP-F770 InfoLITHIUM Rechargeable Battery Pack  
NP-F970 InfoLITHIUM Rechargeable Battery Pack

### Specifications

#### Recording/playback performance

##### Recording format

1080/60i, 1080/50i, 480/60i (NTSC), 576/50i (PAL)

##### Playout/down conversion format

1080/60i, 1080/50i, 480/60i (NTSC), 576/50i (PAL), 480/60p, 576/50p,

##### Tape speed

###### HDV/DV SP

Max. 18.812 mm/s with PHDVM-63DM cassette

###### DVCAM

Max. 28.218 mm/s with PHDVM-63DM cassette

##### Playback/Recording time

###### HDV/DV SP

Max. 63 min with PHDVM-63DM cassette

###### DVCAM

Max. 41 min with PHDVM-63DM cassette

##### Fast forward/Rewind time

Approx. 2 min 40 s with PHDVM-63DM cassette

#### Input/output connectors/devices

##### Video input/output

###### RCA pin x 2

Video signal: 1 Vp-p, 75  $\Omega$  unbalanced, sync negative

##### S-video input/output

###### Mini-DIN 4-pin x 2

Y: 1 Vp-p, 75  $\Omega$  unbalanced, sync negative

C: 0.286 Vp-p (NTSC), 0.3 Vp-p (PAL), 75  $\Omega$  unbalanced,

##### Component video output

###### RCA pin x 3

Y: 1 Vp-p (0.3 V, sync negative)

Pr/Pb (Cr/Cb): 700 mVp-p (100% color bar), input impedance 75  $\Omega$

##### i.LINK

###### 4-pin

##### Phones

Stereo minijack ( $\phi$ 3.5 mm), 8  $\Omega$  loading

##### LANC

Stereo mini-minijack ( $\phi$ 2.5 mm)

##### Audio input

###### RCA pin x 2

Input level: max. 4 Vrms, input impedance: min.

47 k $\Omega$  unbalanced

##### Audio output

###### RCA pin x 2

Output level: 2 Vrms (full bit), output impedance:

max. 1 k $\Omega$

##### LCD monitor

3.5-inch type, approx. 250,000 pixels (1120 x 224), hybrid type

#### General

##### Mass

Approx. 1.8 kg (3 lb 15 1/2 oz)

##### Power requirements

DC 8.4 V (DC IN jack), DC 7.2 V (Battery jack input),

##### Power consumption

###### HDV

6.5 W (playback mode with LCD monitor on)

###### DVCAM/DV

5.7 W (playback mode with LCD monitor on)

##### Operating temperature

5 to 40  $^{\circ}$ C (41 to 104  $^{\circ}$ K)

##### Storage temperature

-20 to +60  $^{\circ}$ C (-4 to 140 $^{\circ}$ K)

## HDV VTRs

# HVR-M10P HDV 1080i VTR

The HVR-M10P is a compact and cost-effective HDV 1080i VTR. (E32 (PAL) area)

### Features

- Adopts HDV 1080i specification of the HDV format that features 1080 effective scanning lines and 1440 horizontal pixels
- Compatible with existing DV tape and new high-grade mini cassette tape; DigitalMaster PHDVM-63DM
- Long recording time of 63 minutes on a mini cassette tape such as the DigitalMaster
- Switchable recording and playback; HDV 1080i/DVCAM/DV and 60i/50i
- Down-conversion playback from 1080i down to 480i, 576i, 480p and 576p
- Aspect ratio conversion from 16:9 to 4:3
- i.LINK interface
- Compact, unique design - can be placed vertically or horizontally
- Built-in, 3.5-inch (\*1) type 16:9 widescreen color LCD monitor
- Status check function for easy confirmation of various parameters including menu settings, mode of operation, time code and audio level
- 2-channel independent audio record level control with audio level meter
- Time code preset
- External control by the supplied wireless Remote Commander unit
- Battery Operation
- Noiseless design, with no cooling fan
- (\*1) Viewable area measured diagonally



### Supplied Accessories

Wireless Remote Commander (1)  
AC adaptor (1)  
Power code (1)  
Stand (1)  
Size AA batteries (2)  
Cleaning cassette (1)  
Operating instructions (1)

### Optional Accessories

VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)  
VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)  
NP-F570 InfoLITHIUM Rechargeable Battery Pack  
NP-F770 InfoLITHIUM Rechargeable Battery Pack  
NP-F970 InfoLITHIUM Rechargeable Battery Pack

### Specifications

#### Recording/playback performance

##### Recording format

1080/60i, 1080/50i, 480/60i (NTSC), 576/50i (PAL)

##### Playout/down conversion format

1080/60i, 1080/50i, 480/60i (NTSC), 576/50i (PAL), 480/60p, 576/50p,

##### Tape speed

###### HDV/DV SP

Max. 18.812 mm/s with PHDVM-63DM cassette

###### DVCAM

Max. 28.218 mm/s with PHDVM-63DM cassette

##### Playback/Recording time

###### HDV/DV SP

Max. 63 min with PHDVM-63DM cassette

###### DVCAM

Max. 41 min with PHDVM-63DM cassette

##### Fast forward/Rewind time

Approx. 2 min 40 s with PHDVM-63DM cassette

### Input/output connectors/devices

#### Video input/output

##### RCA pin x 2

Video signal: 1 Vp-p, 75  $\Omega$  unbalanced, sync negative

#### S-video input/output

##### Mini-DIN 4-pin x 2

Y: 1 Vp-p, 75  $\Omega$  unbalanced, sync negative

C: 0.286 Vp-p (NTSC), 0.3 Vp-p (PAL), 75  $\Omega$  unbalanced,

#### Component video output

##### RCA pin x 3

Y: 1 Vp-p (0.3 V, sync negative)

Pr/Pb (Cr/Cb): 700 mVp-p (100% color bar), input impedance 75  $\Omega$

#### i.LINK

##### 4-pin

#### Phones

Stereo minijack ( $\phi$ 3.5 mm), 8  $\Omega$  loading

#### LANC

Stereo mini-minijack ( $\phi$ 2.5 mm)

#### Audio input

##### RCA pin x 2

Input level: max. 4 Vrms, input impedance: min.

47 k $\Omega$  unbalanced

#### Audio output

##### RCA pin x 2

Output level: 2 Vrms (full bit), output impedance:

max. 1 k $\Omega$

#### LCD monitor

3.5-inch type, approx. 250,000 pixels (1120 x 224), hybrid type

### General

#### Mass

Approx. 1.8 kg (3 lb 15 1/2 oz)

#### Power requirements

DC 8.4 V (DC IN jack), DC 7.2 V (Battery jack input)),

#### Power consumption

##### HDV

6.5 W (playback mode with LCD monitor on)

##### DVCAM/DV

5.7 W (playback mode with LCD monitor on)

#### Operating temperature

5 to 40  $^{\circ}$ C (41 to 104  $^{\circ}$ K)

#### Storage temperature

-20 to +60  $^{\circ}$ C (-4 to 140 $^{\circ}$ K)

HDV VTRs



HDV VTRs

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## VTR Accessories/Peripherals

### BKDW-101 Remote Control Panel

Remote control panel for DVW-2000 Series Digital Betacam recorders

**Applicable Models**

DVW-2000 Digital Betacam Recorder  
DVW-2000P Digital Betacam Recorder  
DVW-M2000 Digital Betacam Recorder  
DVW-M2000P Digital Betacam Recorder



### BKMW-101 Remote Control Panel

Remote control panel for MSW-2000 series MPEG IMX VTRs

**Applicable Models**

MSW-2000 MPEG IMX Recorder  
MSW-A2000 MPEG IMX Recorder (/1 model)  
MSW-A2000P MPEG IMX Recorder (/1 model)  
MSW-M2000 MPEG IMX Recorder (/1 model)  
MSW-M2000E MPEG IMX Recorder (with Network Interface Board installed)  
MSW-M2000EP MPEG IMX Recorder (with Network Interface Board installed)  
MSW-M2000P MPEG IMX Recorder (/1 model)  
MSW-M2100 MPEG IMX Player (/1 model)  
MSW-M2100E MPEG IMX Player (with Network Interface Board installed)  
MSW-M2100EP MPEG IMX Player (with Network Interface Board installed)  
MSW-M2100P MPEG IMX Player (/1 model)



## VTR Accessories/Peripherals

### BKMW-102 Remote Control Unit

Control panel case for BKMW-101 remote control panel

#### Applicable Models

DVW-2000 Digital Betacam Recorder  
 DVW-2000P Digital Betacam Recorder  
 DVW-M2000 Digital Betacam Recorder  
 DVW-M2000P Digital Betacam Recorder  
 HDW-2000 HDCAM VTR  
 HDW-D2000 HDCAM Recorder  
 HDW-M2000 HDCAM VTR  
 HDW-M2000P HDCAM VTR  
 HDW-M2100 HDCAM Player  
 HDW-M2100P HDCAM Player  
 HDW-S2000 HDCAM Recorder  
 HDW-S2000P HDCAM Recorder  
 MSW-2000 MPEG IMX Recorder  
 MSW-A2000 MPEG IMX Recorder (/1 model)  
 MSW-A2000P MPEG IMX Recorder (/1 model)  
 MSW-M2000 MPEG IMX Recorder (/1 model)  
 MSW-M2000E MPEG IMX Recorder (with Network Interface Board installed)  
 MSW-M2000EP MPEG IMX Recorder (with Network Interface Board installed)  
 MSW-M2000P MPEG IMX Recorder (/1 model)  
 MSW-M2100 MPEG IMX Player (/1 model)  
 MSW-M2100E MPEG IMX Player (with Network Interface Board installed)  
 MSW-M2100EP MPEG IMX Player (with Network Interface Board installed)  
 MSW-M2100P MPEG IMX Player (/1 model)



### BKMW-103 Control Panel Extension Kit

Control panel extension kit for MSW-2000 series MPEG IMX VTRs, DVW-2000 series Digital Betacam VTRs and HDW-2000 series HDCAM VTRs

#### Applicable Models

DVW-2000 Digital Betacam Recorder  
 DVW-2000P Digital Betacam Recorder  
 DVW-M2000 Digital Betacam Recorder  
 DVW-M2000P Digital Betacam Recorder  
 HDW-2000 HDCAM VTR  
 HDW-D2000 HDCAM Recorder  
 HDW-M2000 HDCAM VTR  
 HDW-M2000P HDCAM VTR  
 HDW-M2100 HDCAM Player  
 HDW-M2100P HDCAM Player  
 HDW-S2000 HDCAM Recorder  
 HDW-S2000P HDCAM Recorder  
 MSW-2000 MPEG IMX Recorder  
 MSW-A2000 MPEG IMX Recorder (/1 model)  
 MSW-A2000P MPEG IMX Recorder (/1 model)  
 MSW-M2000 MPEG IMX Recorder (/1 model)  
 MSW-M2000E MPEG IMX Recorder (with Network Interface Board installed)  
 MSW-M2000EP MPEG IMX Recorder (with Network Interface Board installed)  
 MSW-M2000P MPEG IMX Recorder (/1 model)  
 MSW-M2100 MPEG IMX Player (/1 model)  
 MSW-M2100E MPEG IMX Player (with Network Interface Board installed)  
 MSW-M2100EP MPEG IMX Player (with Network Interface Board installed)  
 MSW-M2100P MPEG IMX Player (/1 model)



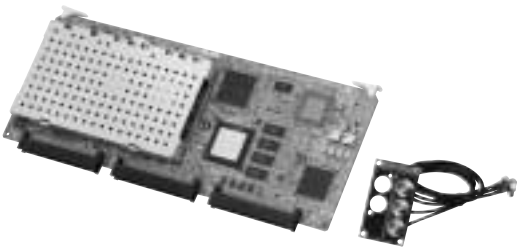
## VTR Accessories/Peripherals

# BKMW-104 HD Up-converter Board

### Features

●Allows 1080/59.94i, 1080/50i and 720/59.94p output from the playback signals of SD 1/2-inch formats(\*1), including BETACAM, BETACAM SP, BETACAM SX, MPEG IMX and Digital BETACAM ●Outputs HD 1125 tri-level sync signal as reference signal

(Note) Either this board or BKMW-E2000/E3000 board can be installed in an MSW-2000 series VTR. (\*1) Only from the playback-compatible format of the VTR used.



### Applicable Models

DVW-2000 Digital Betacam Recorder  
DVW-2000P Digital Betacam Recorder  
DVW-M2000 Digital Betacam Recorder  
DVW-M2000P Digital Betacam Recorder  
MSW-2000 MPEG IMX Recorder  
MSW-A2000 MPEG IMX Recorder (/1 model)  
MSW-A2000P MPEG IMX Recorder (/1 model)  
MSW-M2000 MPEG IMX Recorder (/1 model)  
MSW-M2000E MPEG IMX Recorder (with Network Interface Board installed)  
MSW-M2000EP MPEG IMX Recorder (with Network Interface Board installed)  
MSW-M2000P MPEG IMX Recorder (/1 model)  
MSW-M2100 MPEG IMX Player (/1 model)  
MSW-M2100E MPEG IMX Player (with Network Interface Board installed)

MSW-M2100EP MPEG IMX Player (with Network Interface Board installed)  
MSW-M2100P MPEG IMX Player (/1 model)

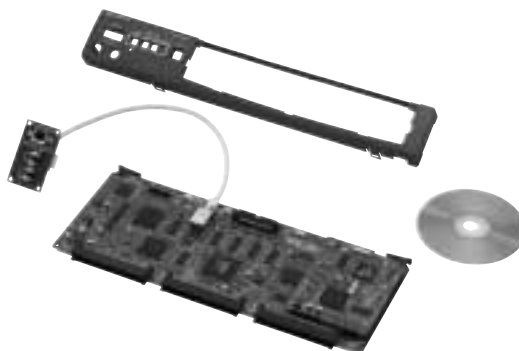
### Supplied Accessories

SDI/HD-SDI connector panel (1)  
SDI INPUT connector masking blank seal (for player) (1)  
VIDEO CONTROL (HD/SD) seal (1)  
Attachment screws (6)  
Operation and installation guide (1)  
Installation manual (1)

## VTR Accessories/Peripherals

### BKMW-E3000 Network Interface Board (option for e-VTR)

Installing the BKMW-E3000 Network Interface Board adds an IP-network interface capability to MSW-2000 Series MPEG IMX VTRs. This network-capable VTR is called "e-VTR". The e-VTR allows video and audio files to be sent and received across a standard network, enabling flexible material exchange all over the world. The file format used for network transfer is MXF (Material eXchange Format), an approved SMPTE standard (SMPTE 337M) for the interchange of audio-visual material and associated metadata between compatible production equipment.



#### Features

- Network file transfer of contents recorded on all Sony 1/2-inch SD format tapes(\*1) including MPEG IMX, Digital Betacam, Betacam SX, Betacam SP and Betacam
- Easy file transfer by PC-based operation or VTR front-panel operation
- 'e-Monitor' function allows operators to view any material loaded in any e-VTR residing on the network
- The e-VTR can generate Proxy Data (low-resolution audio/video stream copy) and send it to a PC's hard drive across any standard network, enabling the Proxy Data to be replayed locally on the PC.
- Remote monitoring of e-VTR using a standard web browser
- Transfer of metadata, which is stored on a tape loaded or metadata stored on an external data server, together with AV data
- Supports a variety of interfaces and protocols including TCP/IP, FTP, HTTP, DHCP, SNMP, 1000Base-T (GbE), 100Base-TX and 10Base-T

(Note) Either this board or BKMW-104 can be installed into an MSW-2000 series VTR (\*1) Playback-compatible format depends on the VTR used.

#### Applicable Models

MSW-2000 MPEG IMX Recorder  
 MSW-A2000 MPEG IMX Recorder (/1 model)  
 MSW-A2000P MPEG IMX Recorder (/1 model)  
 MSW-M2000 MPEG IMX Recorder (/1 model)  
 MSW-M2000P MPEG IMX Recorder (/1 model)  
 MSW-M2100 MPEG IMX Player (/1 model)  
 MSW-M2100P MPEG IMX Player (/1 model)

#### CPU:

1-GHz Intel Pentium processor or faster

#### Display:

XGA 1024 x 768 or higher with more than 16-bit high color

#### Sound:

MCI Device & Driver, Microphone, Speaker

#### Interface:

Fast Ethernet or GbE is recommended.

#### Hard disk drive:

5 MB or more available

#### Supplied Accessories

e-VTR Manager software (1)  
 Operation manual (1)  
 Connector panel with RJ-45 connector (1)  
 Upper front panel for e-VTR operation (1)

#### Specifications

##### Supported Protocols and Interfaces

##### Protocols:

TCP/IP, FTP, HTTP, DHCP, SNMP

##### Interface:

Network Interface, RJ-45, 1000Base-T (GbE), 100Base-TX, 10Base-T

#### System Requirements for the Supplied e-VTR Application Software

##### PC:

IBM PC/AT-compatible machine

##### Operating system:

Microsoft Windows 2000, XP (with DirectX 8.1b or higher)

##### Memory capacity:

256-MB RAM minimum

## VTR Accessories/Peripherals

### DSBK-1501 Digital Input/Output Board

#### Features

- Allows Input/Output of SDI, SDTI(QSDI), AES/EBU



#### Applicable Models

DSR-1500A Editing Recorder  
DSR-1500AP Editing Recorder

#### Specifications

##### Input

SDI/SDTI: BNC (1), AES/EBU: BNC (2)

##### Output

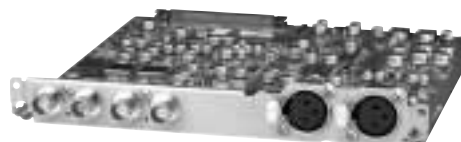
SDI/SDTI: BNC (2)(\*), AES/EBU: BNC (2)

(\*)SDI and SDTI(QSDI) outputs share the same BNC connectors

### DSBK-1504 Analog Input Board

#### Features

- A full range of analog interfaces - composite, component, S-Video(Y/C) and two channel analog audio are supported.



#### Applicable Models

DSR-1500A Editing Recorder

#### Specifications

BNC (3)

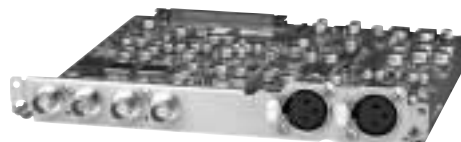
XLR-3-pin female (2)

(\*)Video, Component and S-Video share the same BNC connectors.

### DSBK-1504P Analog Input Board

#### Features

- A full range of analog interfaces - composite, component, S-Video(Y/C) and two channel analog audio are supported.



#### Applicable Models

DSR-1500AP Editing Recorder

#### Specifications

BNC (3)

XLR-3-pin female (2)

(\*)Video, Component and S-Video share the same BNC connectors.

### DSBK-1601 SDI, AES/EBU Output Board

#### Features

- Allows output of SDI (BNC x 2) and AES/EBU (BNC x 2)

#### Applicable Models

DSR-1600A DVCAM Editing Player  
DSR-1600AP DVCAM Editing Player



## VTR Accessories/Peripherals

### DSBK-1801 SDI,AES/EBU Input/Output Board

#### Features

- Allows Input/Output of SDI and AES/EBU

#### Applicable Models

DSR-1800A DVCAM Editing Recorder  
DSR-1800AP DVCAM Editing Recorder

#### Specifications

##### Input

SDI: BNC (2)  
AES/EBU: BNC (2)

##### Output

SDI: BNC (2)  
AES/EBU: BNC(2)



### DSRM-10 Remote Control Unit

#### Features

- Provides wired remote control operation for STOP/REC/PAUSE/REW/PLAY/FFWD ●JOG/SHUTTLE operation ●Enables  $\pm 16$  times normal speed in search operation

#### Applicable Models

DSR-11 Recorder  
DSR-1500A Editing Recorder  
DSR-1500AP Editing Recorder  
DSR-50 Portable Recorder  
DSR-50P Portable Recorder

#### Supplied Accessories

Operating manual (1)

#### Specifications

##### Power requirements:

DC 5 V (supplied from the connected VTR)

##### Power consumption:

50 mW

##### Remote control:

Stereo mini-plug (with attached cable,  
length 3 m (10 ft))

##### Dimensions:

90 (W)  $\times$  46 (H)  $\times$  182 (D) mm  
(3 5/8  $\times$  1 13/16  $\times$  7 1/4 inches)

##### Mass:

Approx. 360 g (12 oz)



VTR Accessories/Peripherals

DSRM-20 Remote Control Unit

Features

●Provides wired remote control operation for STOP/REC/PAUSE/REW/PLAY/FFWD ●JOG/SHUTTLE operation ●Enables ±17 times normal speed in search operation ●Index/Date/Photo search function ●Displays tape information during playback when using the tape recorded on the DSR-250/250P/PD100A/PD100AP/PD150/PD150P DVCAM Camcorders.



Applicable Models

DSR-11 Recorder  
DSR-25 Recorder  
DSR-45 Recorder  
DSR-45P Recorder  
DSR-50 Portable Recorder  
DSR-50P Portable Recorder

Specifications

Power requirements:  
DC 5 V  
Power consumption:  
50 mW  
Remote control:  
Stereo mini-plug  
(with attached cable, length 3 m (10 ft))

Dimensions:

90 (w) × 46 (h) × 182 (d) mm  
(3 5/8 × 1 13/16 × 7 1/4 inches)  
Mass:  
Approx. 360 g (12 oz)

Supplied Accessories

Operating instructions (1)

HKDV-501A HD-SD Down Converter Board

Features

●By slotting HKDV-501A into HDW-F500/HDW-500, it enables output of 525 or 625 down converted signals.

Applicable Models

HDW-F500 HDCAM Digital Videocassette Recorder

HKDV-502 HD Line Converter Board

Features

●By slotting HKDV-502 into HDW-F500/500, you can select an effective scanning line number of 1,035 and 1,080. It also automatically switches between processing for movie and still portions of a picture, thus improving the vertical resolution during slow motion playback.

Applicable Models

HDW-F500 HDCAM Digital Videocassette Recorder

## VTR Accessories/Peripherals

### HKDV-506A SDTI Board

#### Features

●By slotting the HKDV-506A into HDW-F500/500, it allows SDTI output capability. (Note: SDTI is defined as SMPTE 305M.)

#### Applicable Models

HDW-F500 HDCAM Digital Videocassette Recorder

### HKDV-507 HD Pull-down Board

#### Features

●By slotting the HKDV-507 into HDW-F500, it allows 3:2 pull-down capability for HDW-F500.

#### Applicable Models

HDW-500 HDCAM Digital Videocassette Recorder  
HDW-F500 HDCAM Digital Videocassette Recorder

## VTR Accessories/Peripherals

# HKDV-900 HD Digital Video Controller

The HKDV-900 digital video controller connects to HDW-F500/500/2000 HD digital VTRs and controls the HD/SD output video signals and the image enhancer of the down converter built into these VTR. It can also be used as a remote controller for the HKPF-9000 multi-format converter, HKPF-1125A 525/625 to HD up-converter and the 525A/AV NTSC down-converter board installed in PFV-HD Series Interface Units. The HKDV-900 can be connected to a maximum of four devices (VTR, HKPF-9000). Only one device can be controlled at a time.



### Features

- Remote control of the HKPF-9000 multi-format converter
- Controls the HKPF-525V/AV HD-SD down-converter board, the HKPF-1125A 525-HD up-converter board and the HKDV-501 HD/SD down-converter board
- Installs in a 19-inches rack unit

### Applicable Models

HDW-2000 HDCAM VTR  
 HDW-D2000 HDCAM Recorder  
 HDW-M2000 HDCAM VTR  
 HDW-M2000P HDCAM VTR  
 HDW-M2100 HDCAM Player  
 HDW-M2100P HDCAM Player  
 HDW-S2000 HDCAM Recorder  
 HDW-S2000P HDCAM Recorder  
 HDW-S280 HDCAM Compact Recorder  
 HKPF-9000 Multi-format converter  
 SRW-5000 HDCAM-SR VTR  
 SRW-5500 HDCAM-SR VTR

### Supplied Accessories

PSW 4×16 Screws, for Rack mounting (4)  
 Operation manual (1)  
 Installation manual (1)

### Optional Accessories

RCC-15H Cables 9-pin/15-pin Remote Control Cable

### Specifications

#### General

Power requirement:  
 25 W or less  
 Operating temperature:  
 5 to 40 °C (41 to 104 °F)  
 Storage temperature:  
 -20 to 60 °C (-4 to 140 °F)  
 Operating humidity:  
 20 to 80% (no condensation)  
 Dimensions:  
 424 x 43.6 x 171 mm  
 (16 3/4 x 1 3/4 x 6 3/4 inches)  
 Mass:  
 Approx. 2.9 kg (4 oz)

## VTR Accessories/Peripherals

### HKDW-101 Remote Control Panel

Remote control panel for HDW-2000 series VTRs

#### Applicable Models

HDW-2000 HDCAM VTR  
 HDW-D2000 HDCAM Recorder  
 HDW-M2000 HDCAM VTR  
 HDW-M2000P HDCAM VTR  
 HDW-M2100 HDCAM Player  
 HDW-M2100P HDCAM Player  
 HDW-S2000 HDCAM Recorder  
 HDW-S2000P HDCAM Recorder



### HKDW-102 SDTI (HDCAM) Interface Board

#### Features

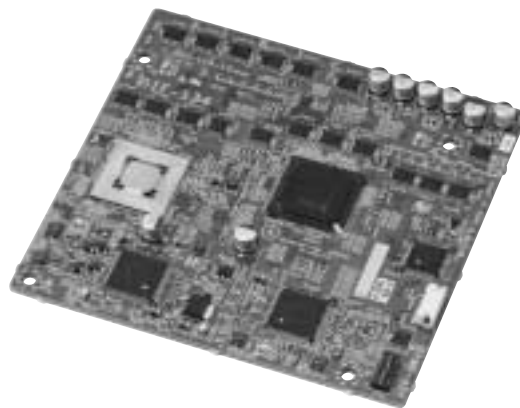
●Adds SDTI (HDCAM) input and output capabilities to an HDW-2000 series VTR

#### Applicable Models

HDW-2000 HDCAM VTR  
 HDW-D2000 HDCAM Recorder  
 HDW-M2000 HDCAM VTR  
 HDW-M2000P HDCAM VTR  
 HDW-M2100 HDCAM Player  
 HDW-M2100P HDCAM Player  
 HDW-S2000 HDCAM Recorder  
 HDW-S2000P HDCAM Recorder

#### Supplied Accessories

"SDTI (HDCAM)" label (1)  
 Spacer (5 mm (7/32 inch) (4)  
 Spacer (10 mm (13/32 inch) (4)  
 Fitting screw (8)  
 Cable clamp (1)  
 Operation and installation guide (1)  
 Installation manual (1)



### HKJ-101 i.LINK Interface Board

#### Features

●Used with the J-H1 or J-H3 ●Provides i.LINK connection between J-H1/J-H3 and DV-compatible NLE systems and recorders ●HDCAM footage can be down-converted to DV 25 Mb/s stream ●Handles video, audio (max. 4 channels) and control signals

#### Applicable Models

J-H1 Compact HDCAM Player  
 J-H3 Compact HDCAM Videocassette Player

## VTR Accessories/Peripherals

# HKPF-9000 Multi-format converter

The HKPF-9000 multi-format converter converts 1080/24P HDTV format signals to a variety of HD/SD formats. It provides optional functions that convert SDTV or 720P to HDTV 1080, frame rate and aspect ratio. For details, see the Format Conversion Table.

The HKPF-9000 is configured as two boards for installation in the PFV-HD Series Interface Units in any combination with other HKPF Series boards.

### Features

- Built-in colorimetry conversion between 601/240M/709
- Down/up-conversion to/from 720/60P (with optional HZPF-9001 software)
- Up-converts SDTV signal to 1080i (with optional HZPF-9002/9003 software)
- Line conversion between 1035 and 1080 active lines (with optional HZPF-9006 software)
- Built-in image enhancer and output gamma corrector
- Selectable aspect ratio conversion (Edge Crop/Squeeze/Letter Box)
- Embedded audio and time code are locked to the output signal after video format conversion
- Variable image trimming and aspect ratio manipulation, background color selection (with optional HZPF-9005 software)
- Remote Control function enables video gain, image enhancer, etc., to be remotely controlled from an optional HKDV-900 HD digital video controller

The HKPF Series function boards install in the PFV-HD Series Interface Units.

### Supplied Accessories

Operation manual (1)  
Installation manual (1)

### Optional Software

HZPF-9003 576 Input Option Software  
HZPF-9005 Aspect/Color Processing Option Software  
HZPF-9006 1035/30P Option Software  
HZPF-9001 720P Input Option Software  
HZPF-9002 480 Input Option Software

### Optional Peripherals

HKDV-900 HD Digital Video Controller

### Specifications

#### General

Power requirements:

+5 V DC: 5.0 A, -5 VDC: 3.0 A  
(Supplied from PFV-HD Series Interface Unit)

Operating temperature:

5 to 40 °C (41 to 104 °F)

Storage temperature:

-20 to 60 °C (-4 to 140 °F)

Operating humidity:

10 to 90% (no condensation)

Dimensions

Board (H x W):

194 x 310 mm

(7 3/4 x 12 1/4 inches)

Connector panel (H x D x W):

218 x 98 x 25 mm

(8 5/8 x 3 7/8 x 1 inches)

Mass

Board:

Approx. 700 g (1 lb 9 oz)

Connector panel:

Approx. 600 g (1 lb 5 oz)

### Inputs/outputs

Digital signal inputs:

SD IN 1, 2 connector (BNC type) (2),  
525/625 component digital serial signal  
with embedded audio conforming to  
SMPTE259M, 270 Mb/s, 0.8 Vp-p, 75  $\Omega$ ,  
unbalanced

HD IN connector (BNC type) (1), HD digital  
serial signal with embedded audio  
conforming SMPTE291M/292M/ 299M, BTA  
S-004B/005B/006B, 1.4835 Gb/s or 1.485  
Gb/s, 75  $\Omega$ , unbalanced

Cable length:

200 m max. (SD)

(With Fujikura 5C2V or equivalent coaxial  
cable)

100 m max. (HD)

(with Fujikura 5C-FB or equivalent coaxial  
cable)

Input return loss:

15 dB or more (5 MHz to 270 MHz)

Reference input:

REF IN connector (BNC type) (1), 1125  
tri-level sync signal conforming to  
SMPTE274M or 525/625 Black Burst signal

Digital signal outputs:

SD OUT1, 2 connector (BNC type) (2),  
component digital serial signal with  
embedded audio conforming to  
SMPTE259M, 270 Mb/s, 0.8 Vp-p  $\pm 10\%$ ,  
75  $\Omega$ , unbalanced

HD OUT1, 2 connector (BNC type) (2), HD  
digital serial signal with embedded audio  
conforming SMPTE291M/292M/ 299M, BTA  
S-004B/005B/006B, 0.8 Vp-p  $\pm 10\%$ , 75  $\Omega$ ,  
unbalanced

Output return loss:

15 dB or more (5 MHz to 270 MHz)

Jitter:

Alignment jitter, 740 ps (SD), 135 ps or less  
(HD)

Rise/fall time:

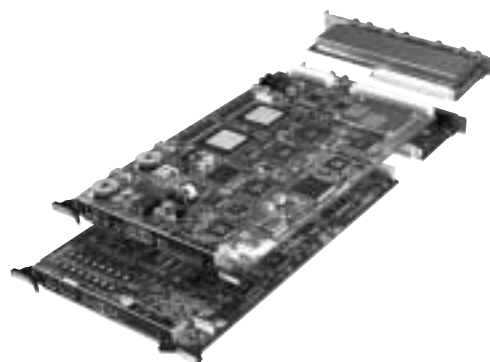
1.5 ns or less (SD), 270 ps or less (HD)

Loop-through output:

Loop-through output connector (BNC type)  
(1)

Remote control:

D-sub 9-pin, female (2)



## VTR Accessories/Peripherals

### HKSR-101 Optical Interface Board

#### Features

- Used with the SRW-1/SRPC-1 VTR system ●Provides single fiber connection between the SRW-1/SRPC-1 and the HDC-F950 digital 4:4:4 HD camera system

#### Applicable Models

SRPC-1 HD Video Processor  
SRW-1 HDCAM-SR Portable VTR

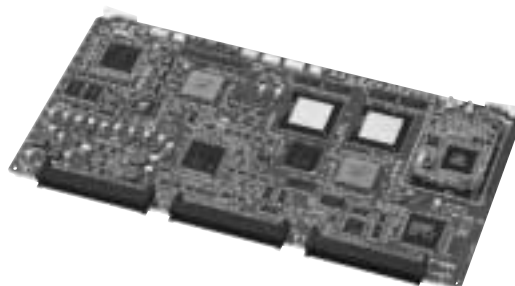
### HKSR-5001 Format Converter Board

#### Features

- Provides a wide variety of format conversions such as upconversion and downconversion, from HD-SDI (both 1080 & 720) to SDI, and from 4:4:4 to 4:2:2 ●2-3 pull-down conversion capability ●1080/720P cross-conversion capability

#### Applicable Models

SRW-5000 HDCAM-SR VTR  
SRW-5500 HDCAM-SR VTR



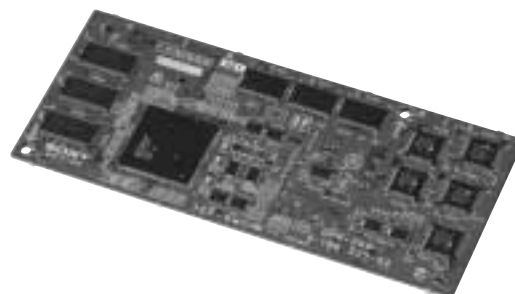
### HKSR-5002 Digital BETACAM Processor Board

#### Features

- Provides the SRW-5000/5500 with the capability to playback Digital BETACAM tapes for output in both HD and SD

#### Applicable Models

SRW-5000 HDCAM-SR VTR  
SRW-5500 HDCAM-SR VTR



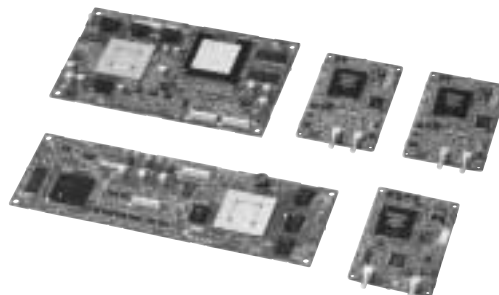
### HKSR-5003 RGB Processor Boards

#### Features

- Provides the SRW-5000/5500 with the capability to record and playback RGB (4:4:4) signals

#### Applicable Models

SRW-5000 HDCAM-SR VTR  
SRW-5500 HDCAM-SR VTR



## VTR Accessories/Peripherals

### HZPF-9001 720P Input Option Software

#### Features

- HZPF-9001 allows HKPF-9000 to down/up-converts to/from 720/60P

#### Applicable Models

HKPF-9000 Multi-format converter

### HZPF-9002 480 Input Option Software

#### Features

- HZPF-9002 allows HKPF-9000 to up-converts SDTV signal to 1080i

#### Applicable Models

HKPF-9000 Multi-format converter

### HZPF-9003 576 Input Option Software

#### Features

- HZPF-9003 allows HKPF-9000 to up-converts SDTV signal to 1080i

#### Applicable Models

HKPF-9000 Multi-format converter

### HZPF-9005 Aspect/Color Processing Option Software

#### Features

- HKPF-9000 with HZPF-9005 provides optional functions; such as variable image trimming and aspect ratio manipulation, background color selection

#### Applicable Models

HKPF-9000 Multi-format converter

## VTR Accessories/Peripherals

# HZPF-9006 1035/30P Option Software

### Features

- HZPF-9006 allows HKPF-9000 to line convert between 1035 and 1080 active lines

### Applicable Models

HKPF-9000 Multi-format converter

## VTR Accessories/Peripherals

### RM-280 Editing Controller

The RM-280 is a compact editing controller intended for simple VTR remote control or basic two-machine editing.

#### Features

- Two-machine editing ●Assemble and insert mode
- Four-channel audio editing ●A variety of edit buttons such as "IN- and OUT-POINT ENTRY", "+ and - TRIM", "AUTO EDIT", "PREVIEW/REVIEW", "GO TO", "ALL STOP" ●TC/CTL/RTC (Relative Time Code) editing mode selectable ●Pinch-on-delay time learning capability for accurate timing adjustments of recorder and player edit in-point ●Edit delay time setting ●Cue signal or tally output via a mini-pin port ●Equipped with reference video input for synchronization with other equipment ●VTR remote control function; PLAY, REWIND, FAST-FORWARD, REC, STOP, PAUSE, EDIT, PREROLL
- Multiple system frequencies including 29.97, 25, 24, 23.98 Hz ●Picture search using the jog/shuttle dial for jog, shuttle and variable-speed playback modes ●Can be powered using the supplied AC adaptor or directly from a connected HDW-S280 HDCAM recorder from its DC output ●Easy-to-use keyboard layout provides straightforward operations ●Displays error messages on the VFD display, indicating the type of errors and device name on which the malfunction occurred for instant action to be taken

#### Applicable Models

HDW-S280 HDCAM Compact Recorder

#### Supplied Accessories

Operation manual (1)  
9-pin/DC multi-cable (1)  
AC adaptor (1)  
Template (1)

#### Specifications

##### Power Requirements

DC 11 - 17 V

##### Power Consumption

5 W

##### Mass

600 g (1 lb 5 oz)

##### Dimensions (w x h x d)

210 x 52 x 161 mm (8 3/8 x 2 1/8 x 6 3/8 inches)

##### Operating Temperature

+5 to +40°C (+41 to +104°F)

##### Storage Temperature

-20 to +60°C (-4 to +140°F)

##### Connectors

RS-422A 9-pin remote x2  
Reference video input (BNC) x1  
RS-232C x1  
Mini-jack for REC TALLY or cue signal output x1  
DC input x1



## VTR Accessories/Peripherals

### RMM-110 Rack Mount Kit

Rack mount kit for HDCAM and HDCAM-SR studio VTRs

#### Applicable Models

HDW-F500 HDCAM Digital Videocassette  
Recorder  
SRW-5000 HDCAM-SR VTR  
SRW-5500 HDCAM-SR VTR



### RMM-131 Rack Mount Kit

Rack mount kit for  
HDW-2000/DVW-2000/MSW-2000/Betacam SP/DVCAM  
series VTRs



#### Applicable Models

DSR-1600A DVCAM Editing Player  
DSR-1600AP DVCAM Editing Player  
DSR-1800A DVCAM Editing Recorder  
DSR-1800AP DVCAM Editing Recorder  
DSR-2000A DVCAM Editing Recorder  
DSR-2000AP DVCAM Editing Recorder  
DVW-2000 Digital Betacam Recorder  
DVW-2000P Digital Betacam Recorder  
DVW-M2000 Digital Betacam Recorder  
DVW-M2000P Digital Betacam Recorder  
HDW-2000 HDCAM VTR  
HDW-D2000 HDCAM Recorder  
HDW-M2000 HDCAM VTR  
HDW-M2000P HDCAM VTR  
HDW-M2100 HDCAM Player  
HDW-M2100P HDCAM Player  
HDW-S2000 HDCAM Recorder

HDW-S2000P HDCAM Recorder  
MSW-2000 MPEG IMX Recorder  
MSW-A2000 MPEG IMX Recorder (/1 model)  
MSW-A2000P MPEG IMX Recorder (/1 model)  
MSW-M2000 MPEG IMX Recorder (/1 model)  
MSW-M2000E MPEG IMX Recorder (with  
Network Interface Board installed)  
MSW-M2000EP MPEG IMX Recorder (with  
Network Interface Board installed)  
MSW-M2000P MPEG IMX Recorder (/1  
model)  
MSW-M2100 MPEG IMX Player (/1 model)  
MSW-M2100E MPEG IMX Player (with  
Network Interface Board installed)  
MSW-M2100EP MPEG IMX Player (with  
Network Interface Board installed)  
MSW-M2100P MPEG IMX Player (/1 model)

## VTR Accessories/Peripherals

# SVRM-100A Remote Control Unit

### Features

- Provides wired remote control operation for  
STOP/REC/PAUSE/REW/PLAY/FFWD ●JOG/SHUTTLE  
operation

### Specifications

Power requirements:

DC 5 V(supplied from the HSR-1)

Power consumption:

40 mW

Remote control:

Stereo mini plug

Control signal:

Control S

Dimensions:

90 (W) × 39 (H) × 182 (D) mm

(3 5/8 × 1 9/16 × 7 1/4 inches)

Mass:

250 g (8.8 lb)



# Digital Video Switchers

MVS-8000A.....	420
MVS-8000ASF.....	422
DVS-9000 .....	424
DVS-9000SF .....	426
MFS-2000 .....	428

Digital Video Switchers

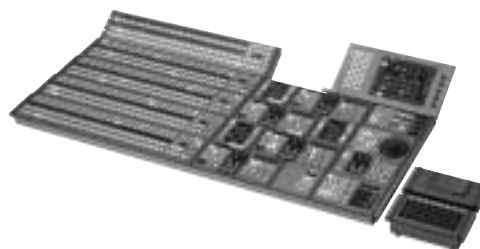
## Digital Video Switchers

# MVS-8000A Multi-Format Switcher Processor

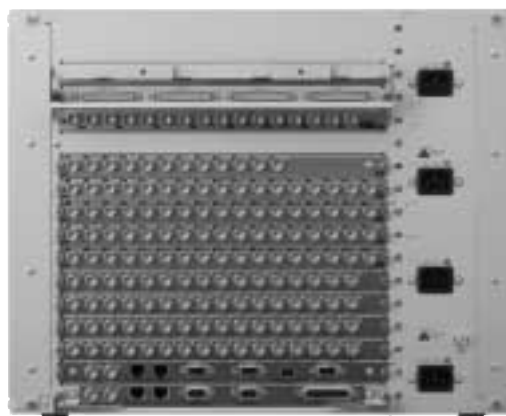
The MVS-8000A is a multi-format switcher processor with a compact frame size only 8 RU high. The MVS-8000A offers a variety of option boards for flexible configurations from 2M/E to 4M/E. The MVS-8000A works as the main processor of the MVS-8000A switcher system with the CCP-8000/CCP-9000 Center Control Panel, MVE-8000A/MVE-9000 Multi Format DME Processor, and MKS-8700/MKS-2700 Device Control Unit.

### Features

- Multi-format capability: 1080i/60, 59.94, 50, 1080p/30, 29.97, 25, 24, 23.976, 720p/59.94, 480i/59.94, 576i/50
- 2-, 2.5-, 3-, 3.5-, or 4-Mix/Effects configurations
- Layout free CCP-8000 series control panels
- Creative M/E functionality: Four full function keyers per M/E, Multiple M/E Program output configurations
- Independent M/E functionality, 4:3 / 16:9, Crosspoint Assignments and Bus Toggle on/off, Snapshots, Keyframe and various setups
- Up to 80 inputs and 56 outputs (including 8 monitor outputs)
- Integrated device control for VTRs, Digital Disk Recorders, Digital Multi-Effects, Routing Switchers and more
- Multi-panel / Multi-processor operations
- Can store 58 frames of HD images
- The frame memory systems has eight simultaneous outputs
- Programmable Macro capability supported
- Integrated 3D DME or external DME control
- Remote maintenance and image file exchange via Ethernet network
- User programmable tally conditions and multi-level tally



MVS Switcher Control Panel



MVS-8000A Multi-Format Switcher Processor

### Supplied Accessories

75  $\Omega$  terminator (1)  
Bracket (4)  
Support angle (2)  
Screw (+B 4 x 10) (8)  
Screw (+PSW 4 x 10) (8)  
Operation manual (1)  
Installation manual (1)

### Optional Accessories

MKS-8050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-2050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MKS-8021A INPUT/OUTPUT BOARD (SDI)  
SWC-5005 Control Panel Cable  
SWC-5010 Control Panel Cable  
MKS-8160A 24-Output Board Set (HD/SD Multi-format)  
MKS-8210A MIX/EFFECT BOARD  
MKS-8440A FRAME MEMORY BOARD  
BZS-8250 Upgrade Software for the capability of Additional Simple PGM/PST  
MVE-8000A Multi-Format DME Processor  
MKS-8020A MVS INTERFACE BOARD  
MKS-8040A EFFECTS BOARD (MVE-8000A)  
HK-PSU02 Power Supply Unit  
MKS-9020M MVS Interface Board Set for the MVE-9000  
MKS-9021M Input/Output Board Set for the MVE-9000  
MKS-9040M Advanced Effects Board for the MVE-9000  
HK-PSU03 Backup Power Supply Unit

MKS-2700 Device Control Unit  
HK-PSU01 Power Supply Unit

### Optional Panels

MKS-8011 Menu Panel  
MKS-8013 32 Aux Bus Module  
MKS-8013B 32 Aux Bus Module  
MKS-8014 24 Aux Bus Module  
MKS-8014B 24 Aux Bus Module  
MKS-8015 16 Aux Bus Module  
MKS-8015B 16 Aux Bus Module  
MKS-8017 32 Crosspoint Module  
MKS-8017B 32 Crosspoint Module  
MKS-8018 24 Crosspoint Module  
MKS-8018B 24 Crosspoint Module  
MKS-8019 16 Crosspoint Module  
MKS-8019B 16 Crosspoint Module  
MKS-8020 Standard Transition Module  
MKS-8021 Simple Transition Right Module  
MKS-8022 Simple Transition Left Module  
MKS-8023 Compact Key Transition Module  
MKS-8024 Flexipad Module  
MKS-8025 Memory Card/USB Module  
MKS-8026 10 Keypad Module  
MKS-8027 Compact Transition Right Module  
MKS-8028 Compact Transition Left Module  
MKS-8030 Key Frame Module  
MKS-8031JS Joy Stick Module  
MKS-8032 DSK Fader Module  
MKS-8033 Utility/Shotbox Module  
MKS-8034DK DSK/FTB Module  
MKS-8035 Key Control Module  
MKS-8040 Blank Panel  
MKS-8041 Blank Panel  
MKS-8075 Extension Adaptor  
MKS-8076 Memory Card/USB Adaptor

MKS-8080 Aux Bus Remote Panel  
MKS-8082 Aux Bus Remote Panel  
MKS-9011 1 M/E Control Panel  
MKS-9012 2 M/E Control Panel

### Optional Boards

MKS-8110M 17-Input Board (HD/SD Multi-format)  
MKS-8111M Additional 12-Input Board (HD/SD Multi-format)  
MKS-8161M 8 Monitor Output Board (HD/SD Multi-format)  
MKS-8170M DME Interface Board (HD/SD Multi-format)  
MKS-8420M Color Correction Board for the MVS-8000 Series Switcher  
MKS-8110HD 17-Input Board (HD)

### Optional Software

BZPS-8000 System Management Software  
BZPS-8001 Switcher Setup Software

### Optional Peripherals

UCP-8060 Universal Control Panel  
MKS-8010 System Control Unit  
MKS-8700 Device Control Unit  
MKS-8701 Tally/GPI Output Board  
MKS-8702 Serial Interface Board  
HK-PSU04 Power Supply Unit  
MVE-9000 Multi-format DME Processor

Not supplied: AC power cord (Part No. 1-557-377-11 (USA and Canada), Part No. 1-782-929-21 (Europe))

# Digital Video Switchers

## Specifications

### General

Power requirements:

100-240 V AC +/- 10%, 50/60 Hz

Power consumption

MVS-8000A Switcher processor:

15 to 6.25 A

MVE-8000A DME processor:

2.5 to 1.0 A

MVE-9000 DME processor:

6.0 to 2.5 A

MKS-8700 Device control unit:

1.4 to 0.8A

MKS-2700 Device control unit:

5.0 to 2.1A

Digital Video Switchers

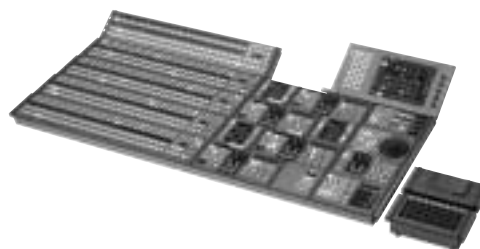
## Digital Video Switchers

# MVS-8000ASF Multi-Format Switcher Processor

The MVS-8000ASF is a multi-format switcher processor with a compact frame size only 4 RU high. The MVS-8000ASF offers a variety of option boards for flexible configurations from 1M/E to 2.5M/E. The MVS-8000ASF works as the main processor of the MVS-8000ASF switcher system with the CCP-8000/CCP-9000 Center Control Panel, MVE-8000A/MVE-9000 Multi Format DME Processor, and MKS-8700/MKS-2700 Device Control Unit.

### Features

- Multi-format capability: 1080i/60, 59.94, 50, 1080p/30, 29.97, 25, 24, 23.976, 720p/59.94, 480i/59.94, 576i/50
- 1-, 1.5-, or 2-Mix/Effects configurations
- Layout free CCP-8000 series control panels
- Creative M/E functionality: Four full function keyers per M/E, Multiple M/E Program output configurations
- Independent M/E functionality, 4:3 / 16:9, Crosspoint Assignments and Bus Toggle on/off, Snapshots, Keyframe and various setups
- Up to 34 inputs and 32 outputs (including 8 monitor outputs)
- Integrated device control for VTRs, Digital Disk Recorders, Digital Multi-Effects, Routing Switchers and more
- Multi-panel / Multi-processor operations
- Can store 58 frames of HD images
- The frame memory systems has eight simultaneous outputs
- Programmable Macro capability supported
- Integrated 3D DME or external DME control
- Remote maintenance and image file exchange via Ethernet network
- User programmable tally conditions and multi-level tally



MVS Switcher Control Panel



MVS-8000ASF Multi-Format Switcher Processor

### Supplied Accessories

75 Ω terminator (1)  
Bracket (4)  
Support angle (2)  
Screw (+B 4 x 10) (8)  
Screw (+PSW 4 x 10) (8)  
Operation manual (1)  
Installation manual (1)

### Optional Accessories

MKS-2050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-8050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MKE-8021A INPUT/OUTPUT BOARD (SDI)  
SWC-5005 Control Panel Cable  
SWC-5010 Control Panel Cable  
MKS-8210A MIX/EFFECT BOARD  
MKS-8440A FRAME MEMORY BOARD  
BZS-8250 Upgrade Software for the capability of Additional Simple PGM/PST  
MVE-8000A Multi-Format DME Processor  
MKE-8020A MVS INTERFACE BOARD  
MKE-8040A EFFECTS BOARD (MVE-8000A)  
HK-PSU02 Power Supply Unit  
MKE-9020M MVS Interface Board Set for the MVE-9000  
MKE-9021M Input/Output Board Set for the MVE-9000  
MKE-9040M Advanced Effects Board for the MVE-9000  
HK-PSU03 Backup Power Supply Unit  
MKS-2700 Device Control Unit

### HK-PSU01 Power Supply Unit

MKS-8162A 12-Output Connector Board

### Optional Panels

MKS-8011 Menu Panel  
MKS-8013 32 Aux Bus Module  
MKS-8013B 32 Aux Bus Module  
MKS-8014 24 Aux Bus Module  
MKS-8014B 24 Aux Bus Module  
MKS-8015 16 Aux Bus Module  
MKS-8015B 16 Aux Bus Module  
MKS-8017 32 Crosspoint Module  
MKS-8017B 32 Crosspoint Module  
MKS-8018 24 Crosspoint Module  
MKS-8018B 24 Crosspoint Module  
MKS-8019 16 Crosspoint Module  
MKS-8019B 16 Crosspoint Module  
MKS-8020 Standard Transition Module  
MKS-8021 Simple Transition Right Module  
MKS-8022 Simple Transition Left Module  
MKS-8023 Compact Key Transition Module  
MKS-8024 Flexipad Module  
MKS-8025 Memory Card/USB Module  
MKS-8026 10 Keypad Module  
MKS-8027 Compact Transition Right Module  
MKS-8028 Compact Transition Left Module  
MKS-8030 Key Frame Module  
MKS-8031JS Joy Stick Module  
MKS-8032 DSK Fader Module  
MKS-8033 Utility/Shotbox Module  
MKS-8034DK DSK/FTB Module  
MKS-8035 Key Control Module  
MKS-8040 Blank Panel  
MKS-8041 Blank Panel  
MKS-8075 Extension Adaptor

### MKS-8076 Memory Card/USB Adaptor

MKS-8080 Aux Bus Remote Panel  
MKS-8082 Aux Bus Remote Panel  
MKS-9011 1 M/E Control Panel  
MKS-9012 2 M/E Control Panel

### Optional Boards

MKS-8110M 17-Input Board (HD/SD Multi-format)  
MKS-8170M DME Interface Board (HD/SD Multi-format)  
MKS-8420M Color Correction Board for the MVS-8000 Series Switcher  
MKS-8110HD 17-Input Board (HD)

### Optional Software

BZPS-8000 System Management Software  
BZPS-8001 Switcher Setup Software

### Optional Peripherals

UCP-8060 Universal Control Panel  
MKS-8010 System Control Unit  
MKS-8700 Device Control Unit  
MKS-8701 Tally/GPI Output Board  
MKS-8702 Serial Interface Board  
HK-PSU04 Power Supply Unit  
MVE-9000 Multi-format DME Processor

Not supplied: AC power cord (Part No 1-557-377-11 (USA and Canada), Part No. 1-782-929-21 (Europe))

# Digital Video Switchers

## Specifications

### General

Power requirements:

100-240 V AC +/- 10%, 50/60 Hz

Power consumption

MVS-8000ASF Switcher processor:

7.5 to 3.1 A

MVE-8000A DME processor:

2.5 to 1.0 A

MVE-9000 DME processor:

6.0 to 2.5 A

MKS-8700 Device control unit:

1.4 to 0.8A

MKS-2700 Device control unit:

5.0 to 2.1A

Digital Video Switchers

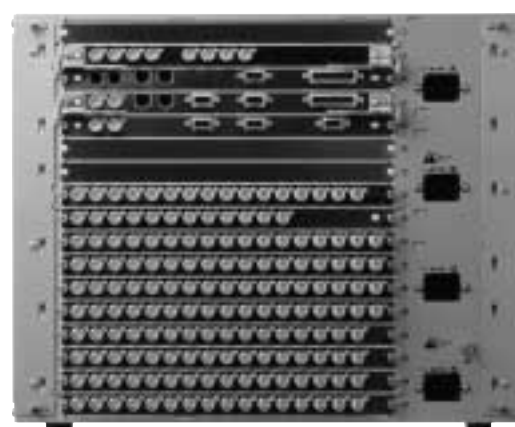
## Digital Video Switchers

### DVS-9000 Production Switcher Processor

Compared to conventional SD switchers, the DVS-9000 Series offers greater system flexibility, a range of enhanced functions and a more compact design. The system-control structure and setup/effect data of the DVS-9000 Series switchers are compatible with the MVS-8000 Series switchers. This enables you to configure a mixed DVS-9000 Series and MVS-8000 Series setup, and also provides a smooth migration path from SD to HD operations, with minimal cost and system reconfiguration.

#### Features

- 525/625 switchable
- 8RU frame provides up to 80 primary inputs, 48 outputs and 8 monitor outputs
- 2-, 3- and 4-M/E configurations are available
- Creative M/E functionality — Four full-function keyers per M/E, Multiple M/E program output configuration
- Independent M/E functionality — 4:3/16:9 modes, crosspoint assignment, BUS toggle on/off, Snapshots, and keyframe can be set independently for each M/E
- RGB color-corrector option (supported in the future)
- Redundant power supply can be installed
- Low power consumption — Switcher processor and built-in DME consume less than 750 W
- Sophisticated DME — BKDS-9470 DME Board Set
- Two 100base-TX network interfaces — Multi-panel and multi-processor operation, Remote maintenance and image file exchange, Set up, effect and image data transfer
- Compatible panels and peripherals with MVS-8000 Series Switchers — CCP-8000 Series and CCP-9000 Series Control Panels, MKS-8700 Device Control Unit, MKS-8080/8082 Aux Bus Remote Panel, UCP-8060 Universal Control Panel



#### Supplied Accessories

75  $\Omega$  terminator (1)  
Bracket (4)  
Support angle (2)  
Screw (+B 4 x 10) (8)  
Screw (+PSW 4 x 10) (8)  
Operation manual (1)  
Installation manual (1)

#### Optional Accessories

MKS-2050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-8050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel

#### Optional Panels

SWC-5002 Control Panel Cable  
SWC-5005 Control Panel Cable  
SWC-5010 Control Panel Cable  
MKS-9011 1 M/E Control Panel  
MKS-9012 2 M/E Control Panel  
MKS-8011 Menu Panel  
MKS-8013 32 Aux Bus Module  
MKS-8013B 32 Aux Bus Module  
MKS-8014 24 Aux Bus Module  
MKS-8014B 24 Aux Bus Module  
MKS-8015 16 Aux Bus Module  
MKS-8015B 16 Aux Bus Module  
MKS-8017 32 Crosspoint Module

MKS-8017B 32 Crosspoint Module

MKS-8018 24 Crosspoint Module

MKS-8018B 24 Crosspoint Module

MKS-8019 16 Crosspoint Module

MKS-8019B 16 Crosspoint Module

MKS-8020 Standard Transition Module

MKS-8021 Simple Transition Right Module

MKS-8022 Simple Transition Left Module

MKS-8023 Compact Key Transition Module

MKS-8024 Flexipad Module

MKS-8025 Memory Card/USB Module

MKS-8026 10 Keypad Module

MKS-8027 Compact Transition Right Module

MKS-8028 Compact Transition Left Module

MKS-8030 Key Frame Module

MKS-8031JS Joy Stick Module

MKS-8031TB Track Ball Module

MKS-8032 DSK Fader Module

MKS-8033 Utility/Shotbox Module

MKS-8034FB FTB Module

MKS-8034DK DSK/FTB Module

MKS-8035 Key Control Module

MKS-8040 Blank Panel

MKS-8041 Blank Panel

MKS-8075 Extension Adaptor

MKS-8076 Memory Card/USB Adaptor

MKS-8010 System Control Unit

#### Optional Boards

MKS-8110SD 17-Input Board (SD)

MKS-8111SD Additional 12-Input Board (SD)

BKDS-9160 24-Output Board

BKDS-9161 8 Monitor Output Board

BKDS-9210 Mix/Effect Board

BKDS-9470 DME Board Set

#### Optional Software

BZPS-8000 System Management Software

BZPS-8001 Switcher Setup Software

BZS-9250 Additional simple PGM/PST function for the DVS-9000 Series switcher system

BZS-9420 Color Correction Software for the DVS-9000 Series Switcher

#### Optional Peripherals

MKS-8080 Aux Bus Remote Panel

MKS-8082 Aux Bus Remote Panel

UCP-8060 Universal Control Panel

MKS-8700 Device Control Unit

MKS-8701 Tally/GPI Output Board

MKS-8702 Serial Interface Board

HK-PSU04 Power Supply Unit

HK-PSU03 Backup Power Supply Unit

Not supplied: AC power cord (Part No. 1-557-377-11 (USA and Canada), Part No. 1-782-929-21 (Europe))

Digital Video Switchers

Specifications

General

Power requirement:  
100 to 240 V AC,  $\pm 10\%$  50/60 Hz

Power consumption:  
DVS-9000:  
8.6 to 4.2 A  
CCP-8000 Series:  
3.3 to 1.4 A  
CCP-9000 Series:  
0.9 to 0.4 A  
Device control unit:  
1.4 to 0.8 A

Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:  
-20 °C to +60 °C (-4 °F to +140 °F)

Operating humidity:  
10% to 90 % (Non-condensing)

Dimensions (W x H x D):  
<DVS-9000>:  
482 x 354 x 520 mm (19 x 14 x 20 1/2 inches)  
<CCP-8000 Series>:  
Main Panel:  
4M/E, 32-crosspoint buttons: 1443 (with mount bracket) x 98.5 x 528 mm (56 7/8 x 4 x 20 7/8 inches)  
3M/E, 24-crosspoint buttons: 1291 (with mount bracket) x 98.5 x 528 mm (50 7/8 x 4 x 20 7/8 inches)  
2M/E, 16-crosspoint buttons: 1139 (with mount bracket) x 98.5 x 396 mm (44 7/8 x 4 x 15 5/8 inches)

Auxiliary Bus Panel:  
32-crosspoint buttons: 782 (with mount bracket) x 132 x 80 mm (30 7/8 x 5 1/4 x 3 1/4 inches)  
24-crosspoint buttons: 630 (with mount bracket) x 132 x 80 mm (24 7/8 x 5 1/4 x 3 1/4 inches)  
16-crosspoint buttons: 478 (with mount bracket) x 132 x 80 mm (18 7/8 x 5 1/4 x 3 1/4 inches)

Menu Panel:  
424 x 220 x 46 mm (16 3/4 x 8 3/4 x 1 13/16 inches)

System Control Unit:  
482 x 132 x 520 mm (19 x 5 1/4 x 20 1/2 inches)  
<CCP-9000 Series>:  
Main Panel:  
2M/E, 12-crosspoint buttons/1M/E, 12-crosspoint buttons,  
478 (with mount bracket) x 208 x 442 mm (18 7/8 x 8 1/4 x 17 1/2 inches)

Menu Panel:  
424 x 220 x 46 mm (16 3/4 x 8 3/4 x 1 13/16 inches)

Device Control Unit:  
482 x 132 x 520 mm (19 x 5 1/4 x 20 1/2 inches)

Memory Card/USB Adaptor:  
263 (with mount bracket) x 132 x 78.5 mm (10 3/8 x 5 1/4 x 3 1/8 inches)

Extension Adaptor:  
263 (with mount bracket) x 132 x 78.5 mm (10 3/8 x 5 1/4 x 3 1/8 inches)

Mass:  
<DVS-9000>:  
Approx. 43 kg (94 lb 13 oz)  
<CCP-8000 Series>:  
Main Panel (4M/E, 32-crosspoint buttons):  
30 kg (66 lb 2 oz)

Auxiliary Bus Panel (32-crosspoint buttons):  
3.7 kg (8 lb 2 oz)

Menu Panel:  
2.2 kg (4 lb 13 oz)  
System Control Unit: 12 kg (26 lb 7 oz)  
<CCP-9000 Series>:  
Main Panel:  
2M/E, 12-crosspoint buttons: 12.5 kg (27 lb 9 oz)  
1M/E, 12-crosspoint buttons: 11.5 kg (25 lb 6 oz)

Menu Panel:  
2.2 kg (4 lb 13 oz)  
<Device Control Unit>:  
18 kg (39 lb 10 oz) (Fully loaded)  
<Memory Card/USB Adaptor>:  
1.2 kg (2 lb 10 oz) (with module)  
<Extension Adaptor>:  
1.5 kg (3 lb 4 oz) (with module)

Video inputs

Primary inputs:  
BNC type connector x 1 each,  
Max.80  
Serial digital video signal, SMPTE259M-C,  
0.8 Vp-p  $\pm 10\%$ , 270 Mb/s, 75  $\Omega$   
Input return loss:  
15 dB  
Cable length:  
200 m (with Belden8281, 5C-2V or equivalent coaxial cable)

External inputs (Built-in DME):  
BNC type connector x 4,  
Serial digital video signal, SMPTE259M-C,  
0.8 Vp-p  $\pm 10\%$ , 270 Mb/s, 75  $\Omega$   
Input return loss:  
15 dB  
Cable length:  
200 m (with Belden8281, 5C-2V or equivalent coaxial cable)

Reference inputs:  
BNC type x 2, loop-through, analog black burst or analog sync

Video outputs

OUT 1 to 48  
OUT 1 to 4, 13 to 16, 25 to 28, 37 to 40:  
BNC type connectors x 2 each  
OUT 5 to 12, 17 to 24, 29 to 36, 41 to 48:  
BNC type connector x 1 each  
Serial digital video signal,  
SMPTE259M-C, 0.8 Vp-p  $\pm 10\%$ ,  
C135270 Mb/s, 75  $\Omega$

OUT 49 to 56 (Monitor outputs):  
BNC type connectors x 2 each  
Serial digital video signal, SMPTE259M-C,  
0.8 Vp-p  $\pm 10\%$ , 270 Mb/s, 75  $\Omega$

MONITOR OUT 1 to 4 (built-in DME MONITOR OUTPUT):  
BNC type connector x 1 each  
Serial digital video signal, SMPTE259M-C,  
0.8 Vp-p  $\pm 10\%$ , 270 Mb/s, 75  $\Omega$

Reference output:  
BNC type x 1, analog sync

Control

Control LAN:  
RJ-45, 100Base-TX  
Data LAN:  
RJ-45, 100Base-TX  
REMOTE 1 to 4:  
D-SUB 9-pin, RS-422A  
TERMINAL:  
D-SUB 9-pin, RS-232C

GPI:  
D-SUB 25-pin, female, relay contact outputs x 4, open collector outputs x 4

EXTENSION:  
BNC type connector x 1

Built-in DME:  
Control LAN:  
RJ-45, 100Base-TX  
Data LAN:  
RJ-45, 100Base-TX  
REMOTE:  
D-SUB 9-pin, RS-422A  
GPI:  
D-SUB 25-pin, female, relay contact outputs x 4, open collector outputs x 4

CCP-9000 Series:  
Control LAN:  
RJ-45, 100Base-TX  
Data LAN:  
RJ-45, 100Base-TX  
Peripheral LAN:  
RJ-45, 100Base-TX  
GPI:  
D-SUB 25-pin, relay contact outputs x 4, open collector outputs x 4  
Remote:  
BNC type, S-BUS  
Device:  
USB type A  
Main Panel:  
D-sub 50-pin  
Menu Panel:  
D-sub 50-pin  
Ext Panel:  
D-sub 50-pin  
Device Control Unit:  
Peripheral LAN:  
RJ-45, 100Base-TX  
Serial tally 1 to 2:  
D-sub 9-pin, RS-422A  
TALLY/GPI inputs:  
D-sub 37-pin x3, TTL level inputs x 34 each,  
TALLY/GPI outputs \*:  
D-sub 37-pin, relay contact outputs 18-ch, up to 15 ports in steps of 3 ports in a frame  
REMOTE \*:  
D-sub 9-pin, RS-422A, various protocols, up to 30 ports in steps of 6 ports in a frame

TALLY/GPI and REMOTE ports are alternatively installed. Mixed configuration of TALLY/GPI and REMOTE ports are supported.

## Digital Video Switchers

# DVS-9000SF Production Switcher Processor

Compared to conventional SD switchers, the DVS-9000 Series offers greater system flexibility, a range of enhanced functions and a more compact design. The system-control structure and setup/effect data of the DVS-9000 Series switchers are compatible with the MVS-8000 Series switchers. This enables you to configure a mixed DVS-9000 Series and MVS-8000 Series setup, and also provides a smooth migration path from SD to HD operations, with minimal cost and system reconfiguration.

### Features

- 525/625 switchable
- 4RU frame provides up to 34 primary inputs, 24 outputs
- 1- and 2-M/E configurations are available
- Creative M/E functionality — Four full-function keyers per M/E, Multiple M/E program output configuration
- Independent M/E functionality — 4:3/16:9 modes, crosspoint assignment, BUS toggle on/off, Snapshots, and keyframe can be set independently for each M/E
- RGB color-corrector option (supported in the future)
- Redundant power supply can be installed
- Low power consumption — Switcher processor and built-in DME consume less than 750 W
- Sophisticated DME — BKDS-9470 DME Board Set
- Two 100base-TX network interfaces — Multi-panel and multi-processor operation, Remote maintenance and image file exchange, Set up, effect and image data transfer
- Compatible panels and peripherals with MVS-8000 Series Switchers — CCP-8000 Series and CCP-9000 Series Control Panels, MKS-8700 Device Control Unit, MKS-8080/8082 Aux Bus Remote Panel, UCP-8060 Universal Control Panel

### Supplied Accessories

75  $\Omega$  terminator (1)  
Bracket (4)  
Support angle (2)  
Screw (+B 4 x 10) (8)  
Screw (+PSW 4 x 10) (8)  
Operation manual (1)  
Installation manual (1)

### Optional Accessories

MKS-2050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-8050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel

### Optional Panels

SWC-5002 Control Panel Cable  
SWC-5005 Control Panel Cable  
SWC-5010 Control Panel Cable  
MKS-9011 1 M/E Control Panel  
MKS-9012 2 M/E Control Panel  
MKS-8011 Menu Panel  
MKS-8013 32 Aux Bus Module  
MKS-8013B 32 Aux Bus Module  
MKS-8014 24 Aux Bus Module  
MKS-8014B 24 Aux Bus Module  
MKS-8015 16 Aux Bus Module  
MKS-8015B 16 Aux Bus Module  
MKS-8017 32 Crosspoint Module  
MKS-8017B 32 Crosspoint Module  
MKS-8018 24 Crosspoint Module

### MKS-8018B 24 Crosspoint Module

MKS-8019 16 Crosspoint Module  
MKS-8019B 16 Crosspoint Module  
MKS-8020 Standard Transition Module  
MKS-8021 Simple Transition Right Module  
MKS-8022 Simple Transition Left Module  
MKS-8023 Compact Key Transition Module  
MKS-8024 Flexipad Module  
MKS-8025 Memory Card/USB Module  
MKS-8026 10 Keypad Module  
MKS-8027 Compact Transition Right Module  
MKS-8028 Compact Transition Left Module  
MKS-8030 Key Frame Module  
MKS-8031JS Joy Stick Module  
MKS-8031TB Track Ball Module  
MKS-8032 DSK Fader Module  
MKS-8033 Utility/Shotbox Module  
MKS-8034FB FTB Module  
MKS-8034DK DSK/FTB Module  
MKS-8035 Key Control Module  
MKS-8040 Blank Panel  
MKS-8041 Blank Panel  
MKS-8075 Extension Adaptor  
MKS-8076 Memory Card/USB Adaptor

### Optional Boards

MKS-8110SD 17-Input Board (SD)  
BKDS-9162 12-Output Board  
BKDS-9210 Mix/Effect Board  
BKDS-9470 DME Board Set  
MKS-8010 System Control Unit

### Optional Software

BZS-9250 Additional simple PGM/PST function for the DVS-9000 Series switcher system  
BZS-9420 Color Correction Software for the DVS-9000 Series Switcher  
BZPS-8000 System Management Software  
BZPS-8001 Switcher Setup Software

### Optional Peripherals

MKS-8080 Aux Bus Remote Panel  
MKS-8082 Aux Bus Remote Panel  
UCP-8060 Universal Control Panel  
MKS-8700 Device Control Unit  
MKS-8701 Tally/GPI Output Board  
MKS-8702 Serial Interface Board  
HK-PSU04 Power Supply Unit  
HK-PSU03 Backup Power Supply Unit

Not supplied: AC power cord (Part No. 1-557-377-11 (USA and Canada), Part No. 1-782-929-21 (Europe))



Digital Video Switchers

Specifications

General

Power requirement:  
100 to 240 V AC,  $\pm 10\%$  50/60 Hz

Power consumption:  
DVS-9000SF:  
5.5 to 2.5 A  
CCP-8000 Series:  
3.3 to 1.4 A  
CCP-9000 Series:  
0.9 to 0.4 A  
Device control unit:  
1.4 to 0.8 A

Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:  
-20 °C to +60 °C (-4 °F to +140 °F)

Operating humidity:  
10% to 90 % (Non-condensing)

Dimensions (W x H x D):  
<DVS-9000SF>:  
482 x 177 x 520 mm (19 x 7 x 20 1/2 inches)  
<CCP-8000 Series>:  
Main Panel:  
4M/E, 32-crosspoint buttons: 1443 (with mount bracket) x 98.5 x 528 mm (56 7/8 x 4 x 20 7/8 inches)  
3M/E, 24-crosspoint buttons: 1291 (with mount bracket) x 98.5 x 528 mm (50 7/8 x 4 x 20 7/8 inches)  
2M/E, 16-crosspoint buttons: 1139 (with mount bracket) x 98.5 x 396 mm (44 7/8 x 4 x 15 5/8 inches)

Auxiliary Bus Panel:  
32-crosspoint buttons: 782 (with mount bracket) x 132 x 80 mm (30 7/8 x 5 1/4 x 3 1/4 inches)  
24-crosspoint buttons: 630 (with mount bracket) x 132 x 80 mm (24 7/8 x 5 1/4 x 3 1/4 inches)  
16-crosspoint buttons: 478 (with mount bracket) x 132 x 80 mm (18 7/8 x 5 1/4 x 3 1/4 inches)

Menu Panel:  
424 x 220 x 46 mm (16 3/4 x 8 3/4 x 1 13/16 inches)

System Control Unit:  
482 x 132 x 520 mm (19 x 5 1/4 x 20 1/2 inches)  
<CCP-9000 Series>:  
Main Panel:  
2M/E, 12-crosspoint buttons/1M/E, 12-crosspoint buttons: 478 (with mount bracket) x 208 x 442 mm (18 7/8 x 8 1/4 x 17 1/2 inches)

Menu Panel:  
424 x 220 x 46 mm (16 3/4 x 8 3/4 x 1 13/16 inches)

<Device Control Unit>:  
482 x 132 x 520 mm (19 x 5 1/4 x 20 1/2 inches)

<Memory Card/USB Adaptor>:  
263 (with mount bracket) x 132 x 78.5 mm (10 3/8 x 5 1/4 x 3 1/8 inches)

<Extension Adaptor>:  
263 (with mount bracket) x 132 x 78.5 mm (10 3/8 x 5 1/4 x 3 1/8 inches)

Mass:  
<DVS-9000SF>:  
Approx. 25 kg (55 lb 8 oz)  
<CCP-8000 Series>:  
Main Panel (4M/E, 32-crosspoint buttons):  
30 kg (66 lb 2 oz)

Auxiliary Bus Panel (32-crosspoint buttons):  
3.7 kg (8 lb 2 oz)

Menu Panel:  
2.2 kg (4 lb 13 oz)

System Control Unit:  
12 kg (26 lb 7 oz)  
<CCP-9000 Series>:  
Main Panel  
2M/E, 12-crosspoint buttons: 12.5 kg (27 lb 9 oz)

TALLY/GPI and REMOTE ports are alternatively installed. Mixed configuration of TALLY/GPI and REMOTE ports are possible.

## Digital Video Switchers

# MFS-2000 Multi-Format Switcher Processor

The MFS-2000 is a 3RU high compact and low-cost multi-format switcher that is suitable for use in small-scale OB vehicles, production studios and editing suites.

### Features

- High performance compact multi-format switcher
- Both multi-format and standard definition configurations are supported
- A standard definition configuration can be upgraded to a multi-format system with minimal cost by upgrading the software
- Useful preset effect patterns are provided as preset wipes and DME wipe patterns
- The FlexiPad control panel enables operations such as Macro, M/E and Effect Snapshot
- Color touch-screen LCD panel
- Serial and parallel tally outputs
- Both the control panel and switcher processor can be fitted with redundant power supply units
- The optional 2-channel DME provides the following stunning effects: 2D/3D linear and nonlinear transforms, Digital SPARKLE™, LIGHTING, SHADOW, TRAIL, Digital SKETCH™, GLOW, and METAL
- The optional frame memory can store a remarkable 435 frames of HD images or 2184 frames of SD images
- Three types of control panels are provided; MKS-2010 1 M/E control panel, MKS-2015 1.5 M/E control panel, and MKS-2017 1.5 M/E wide control panel



### Supplied Accessories

AC power cord (1)  
Operation manual (1)

### Optional Accessories

MKS-2050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-8050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-2420M Color Corrector Board  
MKS-2110M Input/Output Connector Board (MFS-2000)  
MKS-2440 Frame Memory Board Set (MFS-2000)  
MKS-2470 DME Board Set  
MKS-2700 Device Control Unit  
BZS-2000M Upgrade Software from SD to Multi Format Configuration  
BZS-2440M Upgrade Software from SD to Multi Format Configuration  
BZS-2470M DME Upgrade Software from SD to Multi Format Configuration  
HK-PSU01 Power Supply Unit  
HK-PSU02 Power Supply Unit  
HK-PSU11 Power Supply Unit (Control Panel)  
MKS-2010 1 M/E Control Panel (MFS-2000)  
MKS-2015 1.5 M/E Control Panel (MFS-2000)  
MKS-2017 1.5 M/E Wide Control Panel (MFS-2000)

### Specifications

#### General

Power requirements:  
AC 100 V to 240 V  $\pm 10\%$  50/60 Hz  
Power consumption:  
4.5 to 2.1 A (fully loaded)  
Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)  
Storage temperature  
-20 °C to +60 °C (-4 °F to +140 °F)

### Dimensions (W x H x D):

440 x 132.4 x 520 mm  
(17 3/8 x 5 1/4 x 20 1/2 inches)

### Mass:

22 kg (48 lb 8 oz, fully loaded)

### Input/output connectors

#### Primary inputs:

Max. 16, BNC x 1 each  
SMPTE292M (HDTV), SMPTE259-C (SDTV)

#### SDI video outputs:

Max. 8, BNC x 2 each  
SMPTE292M (HDTV), SMPTE259-C (SDTV)

#### Reference inputs:

BNC x 2, 75 $\Omega$  with loop-through  
HDTV system: HD tri-level sync, Analog black burst, or analog sync  
SDTV system: Analog black burst or analog sync

#### Reference output:

BNC x 1, 75 $\Omega$   
HDTV system: HD tri-level sync  
SDTV system: Analog sync

### Control signals

#### Switcher interface:

Control LAN: RJ-45 x 1, 100BASE-TX  
Data LAN: RJ-45 x 1, 100BASE-TX

#### DME interface:

Control LAN: RJ-45 x 1, 100BASE-TX  
Data LAN: RJ-45 x 1, 100BASE-TX

#### GPI:

D-sub 25-pin (female) x 1, TTL level inputs x 8,  
Relay contact outputs x 4, Open collector outputs x 4

#### Tally:

D-sub 25-pin (female) x 1, Relay contact outputs x 4, Open collector outputs x 4

#### Serial tally:

D-sub 9-pin (female) x 1, RS-422A

# Digital Multi Effects

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Digital Multi Effects

## Digital Multi Effects

# MVE-8000A Multi-Format DME Processor

The MVE-8000A is a multi-format DME processor for the MVS-8000A Series Multi-Format Production Switcher System with its frame size only 2 RU. The MVE-8000A provides a wide variety of effects such as 2D/3D and linear/non-linear transforms in both HDTV and SDTV video formats, which can be easily switched from switcher control panel without swapping the boards. The MVE-8000A is integrated to the MVS-8000A Series switcher processor via dedicated cables without consuming the SDI inputs and outputs on the switcher processor. In conjunction with the MVE-8000A, the MVS-8000A Series system allows DME- Wipes, Processed Key, and a wide variety of attractive effects, which can be controlled from the control panel as if they were a part of the switcher functions.



### Applicable Models

MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### Supplied Accessories

Operation Manual (1)  
Installation Manual (1)  
Switcher Video Interface Cable (3 m) (2)

### Optional Accessories

MKE-8021A INPUT/OUTPUT BOARD (SDI)  
MKE-8020A MVS INTERFACE BOARD  
MKE-8040A EFFECTS BOARD (MVE-8000A)  
HK-PSU02 Power Supply Unit

### Specifications

#### General

Power requirements:  
100 - 240 V  $\pm$  10%, 50/60 Hz  
Power consumption:  
2.5 to 1.0 A  
Dimensions (W/H/D):  
440 mm x 87.5 mm x 520 mm (17 3/8 x 3 1/2 x 20 1/2 inches)  
(without projection)  
Mass:  
16 kg (35 lb 4 oz) (fully loaded)  
Operation Temperature:  
+ 5 °C to + 40 °C (+ 41 °F to + 104 °F)  
Operating humidity:  
10% to 90% (non-condensing)

#### Inputs/outputs

MKE-8020A:  
MDR 68-pin x 2 (inputs/outputs: 2 CH x 2), LVDS  
MKE-8021A:  
Video inputs-Video/Key: BNC x 8, SDI  
Video outputs-Video/Key: BNC x 8, SDI  
Monitor outputs: BNC x 4, SDI  
Reference:  
BNC x 2, 75  $\Omega$  with loop-through output  
Analog black burst or HD tri-level sync

#### System interface

Control LAN:  
RJ-45 x 1, 100BASE-TX  
DATA LAN:  
RJ-45 x 1, 100BASE-TX  
Editor:  
D-sub 9-pin x 4, RS-422A  
GPI:  
D-sub 25-pin, TTL level inputs x 8,  
relay contact outputs x 4, open collector  
outputs x 4

## Digital Multi Effects

# MVE-9000 Multi-format DME Processor

The MVE-9000 provides high picture quality and a rich set of features for the creation of stunning special effects in live environments and post-production.

### Features

- High-quality DME ●HD/SD multi-format capability
- HDTV: 1080i/50, 59.94, 60, 1080p/23.976, 24, 25, 29.97, 30, 720p/59.94 ●SDTV: 480i/59.94, 576i/50 ●A variety of effects ●3D Linear/Nonlinear, Sparkle, Input Freeze, Defocus, Key Border, Beveled Edge, Glow, Sketch, Metal, Mask, Light, Shadow, Trail and more ●Up to four channels of Combine with Intersect and Dim/Fade ●Effect data compatible with the MVE-8000 ●Y/C/K 10-bit processing ●Field/Frame-based processing
- High-performance pixel-based anti-alias filter
- High-quality multi-point interpolation ●Up to four channels can be configured on a channel basis ●One of the following video interface boards can be installed — The MKE-9021M for standalone operations or MKE-9020M for dedicated connection to the MVS Series switcher ●4U high, less than 15 kg in weight, and less than 500 W consumed when fully loaded with its option boards ●Redundant power supply HK-PSU04 can be installed ●Four RS-422 interfaces for control from external editor ●Each channel can be independently controlled ●GPI and Tally interface ●100Base-TX network interfaces allow the transfer of files (image, effect, setup, etc.) between equipment connected to the MVS Data LAN, and real time control via the MVS Control LAN



Digital Multi Effects

### Applicable Models

MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### Supplied Accessories

Operation Manual (1)  
Installation Manual (1)  
75  $\Omega$  Terminator (1)  
Mounting Bracket (1)  
Support Angle (1)  
Screw (1)

### Optional Accessories

BZDM-9050 Texture Lighting Software

### Optional Boards

MKE-9020M MVS Interface Board Set for the MVE-9000  
MKE-9021M Input/Output Board Set for the MVE-9000  
MKE-9040M Advanced Effects Board for the MVE-9000  
HK-PSU04 Power Supply Unit

### Specifications

#### General

Power requirement:  
100 V to 240 V  $\pm$ 10% 50/60 Hz  
Power consumption:  
500 VA  
Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)  
Storage temperature:  
-20 °C to +60 °C (-4 °F to +140 °F)  
Operating humidity:  
10% to 90% RH

### Dimensions (W x H x D):

482 x 194 x 520 mm (19 x 7 3/4 x 20 1/2 inches)

### Mass:

Approx. 20 kg (44 lb 1 oz)

### Inputs

Video inputs (MKE-9021M)  
SDI  
Video/Key: BNC-type connectors x 8  
Ext Video IN: BNC-type connectors x 4

### Reference:

BNC type connectors x 2, 75  $\Omega$  with loop-through output  
Analog black burst or HD tri-level sync

### Outputs

Video outputs (MKS-9021M)  
SDI  
Video/Key: BNC-type connectors x 8  
Monitor Out: BNC-type connectors x 4  
Video inputs/Video outputs (MKE-9020M)

### MVS interface:

MDR 68-pin x 2 (inputs/outputs: 2 CH x 2), LVDS

### Control signals

Control LAN:  
RJ-45 x 1, 100Base-TX  
Data LAN:  
RJ-45 x 1, 100Base-TX  
Remote:  
D-SUB 9-pin x 4, RS-422  
GPI:  
D-SUB 25-pin x 2, dry contact or open collector inputs x 16, relay contact outputs x 8, open collector outputs x 8

Digital Multi Effects

Digital Multi Effects

DME Switchers/Ancast

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DME Switchers/Ancast

## DME Switchers/Anycast

### AWS-G500 Live Content Producer

A powerful all-in-one content creation tool designed for live event programming. Ideal for applications such as Church production, Product promotion, Corporate videos, Event staging, Live stages/music clip creation, Conferences/seminars, Distance learning. The Anycast Station comprises a high-quality video switcher, an audio mixer, a large LCD display, and a streaming encoder and server. All packed into an attache case size chassis.

#### Features

- The Anycast Station comes equipped with a high-quality video switcher, an audio mixer, a large LCD display, camera control functions and a streaming encoder and server.
- Compact and lightweight - all packed into an attache case size chassis weighing only about 17 lb 10 oz. (8 kg)
- Easy and integrated operation
- Text typing tool software
- Seamless switching between video and PC sources
- Flexible video input configurations
- Multi-camera recording for convenient nonlinear editing
- Streaming encoder and streaming server

#### Supplied Accessories

Installation Guide (1)  
Keyboard (1)  
Cell battery (1)  
Pin to BNC Connector (4)

#### Optional Accessories

BKAW-550 PC Video Interface Module  
BKAW-570 SD Video Interface Module



## DME Switchers/Anycast

### Specifications

#### - General-

##### Power Requirements

AC 100-240 V, 50/60 Hz

##### Operating Voltage

AC 90-260 V, 47/63 Hz

##### Power Consumption

160 W

##### Operating Temperature

5 to 40 °C (42 to 104 °F)

##### Dimensions (W x H x D)

424 x 114 x 354 mm (16 3/4 x 4 1/2 x 14 inches)

##### Mass

Approximately 8.0 kg (17 lb 10 oz)

#### - Video Signals -

##### VIDEO INPUTS (in ex-factory configuration)

###### Composite

BNC Type x 4

Video: 1.0 Vp-p, 75  $\Omega$ , Sync negative

###### S-Video

DIN Type x 4

Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative

C: 0.286 Vp-p at burst, 75  $\Omega$  (NTSC)

C: 0.3 Vp-p at burst, 75  $\Omega$  (PAL)

###### RGB

D-Sub Shrink 15pin Type x2 (Female)

##### VIDEO OUTPUTS

###### Composite

BNC Type x1

Video: 1.0 Vp-p, 75  $\Omega$ , Sync negative

##### VIDEO OUTPUTS

###### Composite

BNC Type x1

Video: 1.0 Vp-p, 75  $\Omega$ , Sync negative

###### S-Video

DIN Type x 1

Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative

C: 0.286 Vp-p at burst, 75  $\Omega$  (NTSC)

C: 0.3 Vp-p at burst, 75  $\Omega$  (PAL)

###### RGB

D-Sub Shrink 15pin Type x2 (Female)

##### REF OUT

BNC Type x 2

Sync: 0.286 Vp-p, 75  $\Omega$ , Sync negative (NTSC)

Sync: 0.3 Vp-p, 75  $\Omega$ , Sync negative (PAL)

C: 0.286 Vp-p at burst, 75  $\Omega$  (NTSC)

C: 0.3 Vp-p at burst, 75  $\Omega$  (PAL)

##### VIDEO INPUTS/OUTPUTS

###### i.LINK (DV IN/OUT)

IEEE 1394 6-pin x4

IEC 61883-2 equiv.

##### Video Signals Performance

###### Quantization and Sampling

8 bit

###### Frequency(SD Video)

Y: 13.5 MHz

R-Y/B-Y: 6.75 MHz

###### Frequency Response

NTSC: 0 to 4.2 MHz +1dB - 3dB

PAL: 0 to 4.8 MHz +1dB - 3dB

###### S/N Ratio

50 dB or more (Composite Y)

###### Y/C Delay

Less than 50 ns

###### REF OUT Frequency Accuracy

Within 50 ppm

##### RGB Preset Signals

XGA 60 Hz (VESA DMT1024x768 60 Hz)

XGA 75 Hz (VESA DMT1024x768 75 Hz)

SXGA 60 Hz (VESA DMT1280x1024 60 Hz)

SXGA 75 Hz (VESA DMT1280x1024 75 Hz) Input Only

#### -HDD Port-

##### i.LINK (in ex-factory configuration)

IEEE 1394 S400 6-pin Type x 2, HDD IF: SBP2

##### HDD Recording / Playback \*1

###### Codec

DV

###### Recording Format

DV (RAW DV)\*2

###### Recording Source

Video: SD Video Inputs / PGM

Audio: Inputs(Stereo) / PGM

Audio(Stereo)

#### -Audio Signals-

##### AUDIO INPUTS

###### Analog Inputs 1-2

XLR/TRS Combo Type x 2

Ref. Level: +4 dBu, -20 dBu, -44 dBu

Mic. Power: +48 V

###### Analog Inputs 3-6

TRS Type (Balanced) x 4

Ref. Level: +4 dBu, -20 dBu, -44 dBu

###### Analog Inputs 7-8

Pin x 2, Ref. Level: -10 dBu

##### AUDIO OUTPUTS

###### PGM OUT

TRS Type x 2, Ref.: +4 dBu,

Impedance: 150  $\Omega$

###### MIX OUT

Pin Type x 2, Ref.: -10 dBu, Impedance:

470  $\Omega$

###### AUX OUT

TRS Type x 2, Ref.: +4 dBu,

Impedance: 150  $\Omega$

###### MONITOR OUT

TRS Type x 2, Ref.: +4 dBu,

Impedance: 150  $\Omega$

##### HEADPHONES

1/4" Stereo Phone Jack Type x 2

70 mW x 2, Impedance: 47  $\Omega$

##### INTERCOM

D-Sub 9-pin Type (Female)

Original Parallel I/O

##### Audio Signals Performance

###### Sampling Frequency

48 kHz x128 over sampling

(A/D)48kHz/32kHz(DV IN)

###### Quantization

24 bit (A/D, D/A), 32/40 bit (DSP)

###### Frequency Response (MIC/LINE)

20 Hz to 20 kHz +0.5 dB to - 2 dB

###### THD (LINE -10dBu 1kHz)

0.1 % or less

###### Dynamic Range

90 dB or more

#### -Other Interfaces-

##### NETWORK

RJ-45 Type x 1, 10 base-T/100 base-TX

##### USB

USB A Type x 2, USB equiv.

##### RGB(GUI)

D-Sub Shrink 15 pin (Female), 1280 x 800 60 Hz

##### REMOTE

D-Sub 9 pin (Male), RS-232C

##### FACTORY USE

D-Sub 15 pin (Male), Original Parallel I/O

##### MEMORY STICK

Memory Stick Slot

Memory Stick Pro/Pro Duo/ are not supported.

##### VISCA OUT

DIN 8pin Type x 1

Sony VISCA camera commands are supported.

##### LCD

15.4" High Brightness LCD

1280 x 800 60 Hz

##### Speaker

Built-In Speaker x 2 Size: 20x40(mm)

##### Streaming Performance

###### Codec

Real Video 9, Real Audio 8

###### Streaming Server

Helix DNA Server

###### Protocol

rtsp (Streaming), UDP, TCP, HTTP (Transport)

###### Audio Sampling Frequency

44.1 kHz

###### Resolution

160x120, 240x180, 320x240

###### Bit Rate (Video+Audio)

Compression Scheme: Variable Bit Rate

Preference: Average (Max. Bit Rate)

34 kbps(56 kbps) / 50 kbps(64 kbps) /

150 kbps(180 kbps) /225 kbps(256

kbps) / 350 kbps(700 kbps) /450

kbps(900 kbps) / 700 kbps(1400 kbps)

###### Frame Rate

15 fps (Typical) \*3

###### Distribution Delay

10 seconds or more

(inc. player's minimum buffering delay)

###### Client Number

34, 50, 150 kbps: Up to 20

225, 350 kbps: Up to 10

450, 700 kbps: Up to 5

(This number is influenced by network condition.)

\*1 Please contact your nearest Sony office or authorized dealer for the availability. \*2 Please contact your nearest Sony office or authorized dealer for other supported formats. \*3 The Anycast Station automatically selects the frame rate according to bit rate and picture resolution. Therefore the frame rate cannot be manually selected.

## DME Switchers/Anycast

### DFS-700A DME Switcher

#### Features

•Video switcher equipped with powerful digital multi effecter •Full digital component processing from input to output at 4:2:2:4 (video and key) •No need for external A/D converters •Incorporates thousands of factory preset effect patterns including non-linear digital effects •The perfect companion for Sony digital VTRs and servers  
 •Real-time system, capable of delivering effects in an instant •Eight standard inputs include four SDI and four analog component •Eight standard outputs include two SDI, two analog component, two analog composite, and two Y/C •Can be used with Sony BVE-2000 and PVE-500 editors via the serial interface •Optional boards are prepared to change the types of inputs (BKDF-701/702)  
 •Chroma keyer, Y/U/V color correction, down stream keyer, fade-to-black, and frame memory are included  
 •2nd channel DME board prepared as an option (BKDF-711) •3D video mapping effects board prepared as an option (BKDF-712) •DSK re-position function  
 •Different transition rates can be set up for DSK On and Off •DSK effects — DSK blink; Border blink; Hue rotation



#### Supplied Accessories

AC power cord (1)  
 25-pin control cable (10 m) (1)  
 Operation manual (1)

#### Optional Accessories

BKDF-712 3D Video Mapping Effects Board  
 BKDF-711 2nd Channel DME Board  
 BKDF-701 Digital/Analog Input Board (NTSC/PAL)

#### Optional Boards

BKDF-702 Analog Composite Input Board (NTSC)

#### Specifications

##### General

##### Power requirements:

AC 120 V, 50/60 Hz

##### Operating voltage:

AC 90 to 130 V, 47 to 63 Hz

##### Power consumption:

200 W

##### Operating temperature:

0 to 40 °C (32 to 104 °F)

##### Dimensions (W x H x D)

##### Control panel:

440 x 121 x 287 mm

17 1/4 x 4 3/4 x 11 1/4 inches

##### Processor unit:

440 x 132 x 520 mm

17 1/4 x 5 1/4 x 20 1/2 inches

##### Mass:

Control panel: 3 kg (6 lb 10 oz)

Processor unit: 14 kg (30 lb 14 oz)

#### Input signals

##### VIDEO INPUTS

##### SDI:

BNC type x 4

270 Mb/s

##### Component:

BNC type x 4 (Y/R-Y/B-Y)

Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative

R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$

##### DSK KEY IN:

BNC type x 2, Loop-through, 1.0 Vp-p, 75  $\Omega$

##### REF VIDEO

BNC type x 2, Loop-through connection

Sync: 0.286 Vp-p

Burst: 0.286 Vp-p

#### Output signals

##### PGM OUT

##### SDI:

BNC type x 2

270 Mb/s

##### Component:

BNC type x 2 (Y/R-Y/B-Y)

Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative

R-Y/B-Y: 0.7 Vp-p, 75  $\Omega$

##### Composite:

BNC type x 2

Video: 1.0 Vp-p, 75  $\Omega$ , Sync negative

##### S-Video:

DIN type x 2 (Y/C)

Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative

C: 0.286 Vp-p at burst, 75  $\Omega$

##### CLEAN OUT:

BNC type x 1

SDI: 270 Mb/s

##### PREVIEW OUT:

BNC type x 1, Composite

Video: 1.0 Vp-p, 75  $\Omega$ , Sync negative

##### BLACK BURST OUT:

BNC type x 3

Sync: 0.286 Vp-p, 75  $\Omega$

Burst: 0.286 Vp-p, 75  $\Omega$

#### Signal processing

##### Sampling rate

Y: 13.5 MHz

R-Y/B-Y: 6.75 MHz

##### Quantization:

Y/R-Y/B-Y: 8 bits

#### Linearity (Composite output)

##### DG:

Less than 3.5% (composite input)

Less than 2% (component, S-Video input)

##### DP:

Less than 2.5° (composite input)

Less than 1° (component, S-Video input)

#### Frequency response:

0 to 5 MHz +0.5 dB/-1 dB

#### S/N:

More than 50 dB (composite)

More than 55 dB (component, S-Video)

#### Y/C delay:

Less than 20 ns (component)

Less than 50 ns (composite, S-Video)

#### Control signals

##### Editor:

D-sub 9-pin x 1, RS-422A

##### GPI/T:

BNC type x 2, TTL Level

##### Panel:

D-sub 25-pin x 1

##### Tally:

D-sub 25-pin x 1, Relay contact outputs x 8

##### Terminal:

USB B-type

## DME Switchers/Anycast

### DFS-700AP DME Switcher

#### Features

- Video switcher equipped with powerful digital multi effector
- Full digital component processing from input to output at 4:2:2:4 (video and key)
- No need for external A/D converters
- Incorporates thousands of factory preset effect patterns including non-linear digital effects
- The perfect companion for Sony digital VTRs and servers
- Real-time system, capable of delivering effects in an instant
- Eight standard inputs include four SDI and four analog component
- Eight standard outputs include two SDI, two analog component, two analog composite, and two Y/C
- Can be used with Sony BVE-2000 and PVE-500 editors via the serial interface
- Optional boards are prepared to change the types of inputs (BKDF-701/702)
- Chroma keyer, Y/U/V color correction, down stream keyer, fade-to-black, and frame memory are included
- 2nd channel DME board prepared as an option (BKDF-711)
- 3D video mapping effects board prepared as an option (BKDF-712)
- DSK re-position function
- Different transition rates can be set up for DSK On and Off
- DSK effects — DSK blink; Border blink; Hue rotation



DME Switchers/Anycast

#### Supplied Accessories

AC power cord (1)  
25-pin control cable (10 m) (1)

#### Optional Boards

BKDF-712 3D Video Mapping Effects Board  
BKDF-711 2nd Channel DME Board  
BKDF-702P Analog Composite Input Board (PAL)  
BKDF-701 Digital/Analog Input Board (NTSC/PAL)

#### Specifications

##### General

Power requirements:  
AC 220/240 V, 50/60 Hz  
Operating voltage:  
AC 180 to 260 V, 47 to 63 Hz  
Power consumption:  
200 W  
Operating temperature:  
0 to 40 °C (32 to 104 °F)  
Dimensions (W x H x D)  
Control panel:  
440 x 121 x 287 mm  
17 1/4 x 4 3/4 x 11 1/4 inches  
Processor unit:  
440 x 132 x 520 mm  
17 1/4 x 5 1/4 x 20 1/2 inches  
Mass  
Control panel: 3 kg (6 lb 10 oz)  
Processor unit: 14 kg (30 lb 14 oz)

##### Input signals

###### VIDEO INPUTS

###### SDI:

BNC type x 4  
270 Mb/s

###### Component

BNC type x 4 (Y/R-Y/B-Y)  
Y: 1.0 Vp-p, 75 Ω, Sync negative  
R-Y/B-Y: 0.525 Vp-p, 75 Ω

###### DSK KEY IN:

BNC type x 2, Loop-through, 1.0 Vp-p, 75 Ω

##### REF VIDEO

BNC type x 2, Loop-through connection  
Sync: 0.3 Vp-p  
Burst: 0.3 Vp-p

##### Output signals

###### PGM OUT

###### SDI:

BNC type x 2  
270 Mb/s

###### Component

BNC type x 2 (Y/R-Y/B-Y)  
Y: 1.0 Vp-p, 75 Ω, Sync negative  
R-Y/B-Y: 0.525 Vp-p, 75 Ω

###### Composite

BNC type x 2  
Video: 1.0 Vp-p, 75 Ω, Sync negative

###### S-Video

DIN type x 2 (Y/C)  
Y: 1.0 Vp-p, 75 Ω, Sync negative  
C: 0.3 Vp-p at burst, 75 Ω

###### CLEAN OUT

BNC type x 1  
SDI: 270 Mb/s

###### PREVIEW OUT

BNC type x 1, Composite  
Video: 1.0 Vp-p, 75 Ω, Sync negative

###### BLACK BURST OUT

BNC type x 3  
Sync: 0.3 Vp-p, 75 Ω  
Burst: 0.3 Vp-p, 75 Ω

##### Signal processing

###### Sampling rate

Y: 13.5 MHz  
R-Y/B-Y: 6.75 MHz

###### Quantization

Y/R-Y/B-Y: 8 bits

###### Linearity (Composite output)

DG:  
Less than 3.5% (composite input)  
Less than 2% (component, S-Video input)

##### DP:

Less than 2.5° (composite input)  
Less than 1° (component, S-Video input)

##### Frequency response:

0 to 5 MHz +0.5 dB/-1 dB

##### S/N:

More than 50 dB (composite)  
More than 55 dB (component, S-Video)

##### Y/C delay:

Less than 20 ns (component)  
Less than 50 ns (composite, S-Video)

##### Control signals

###### Editor:

D-sub 9-pin x 1, RS-422A

###### GPI/T:

BNC type x 2, TTL Level

###### Panel:

D-sub 25-pin x 1

###### Tally:

D-sub 25-pin x 1, Relay contact outputs x 8

###### Terminal:

USB B-type

DME Switchers/Anycast

DME Switchers/Anycast

Editing Control Units

BVE-2000 ..... 440  
BVE-700 ..... 441  
BVE-9100 ..... 442

Editing Control Units

## Editing Control Units

### BVE-2000 Editing Control Unit

#### Features

- Maximum six VTRs can be controlled in A/B roll editing
- Three auxiliary sources ●Powerful switcher interface via serial and parallel sources ●Fader, wipes, dissolves, keyer and DSK control ●Save/recall of initial panel settings for the DVS-2000C, BVS-3000 series, DFS-300/500/700, and GVG-100 switchers ●Control of E-File/E-MEM/Snapshot WRITE/READ functions of DVS-2000C, BVS-3000 series, DFS-300/500/700 and GVG-100 ●Monitor switcher control ●Four audio channel control ●PCM-7030/7050 audio memory control capability
- List management facility: 1)INSERT, DELETE, MOVE, COPY, CORRECT, SORT, MODIFY, and CLEAN UP functions 2)RIPPLE function 3)998 event memory capacity ●Built-in 3.5-inch floppy disk drive ●Any combination of LTC, VITC and CTL editing
- Discontinuous time code source can be handled ●20 user programmable keys ●Automatic time tracking allows automatic calculation of the player matched frame
- ACTION TRACK, SCROLL TRACK, PLAYER TRACK, RECORDER TRACK operation possible ●Advanced graphic effect mode display ●Two recorder operation capability ●Temporary recorder assignment possible
- Synchronization accuracy selection provides synchronization using various time code grades, or no time code at all



#### Supplied Accessories

Maintenance manual (1)  
User's guide (1)  
Operation manual (1)  
25-pin D-sub male (1)  
Rack mount screws (1)  
AC power cord (1)

#### Optional Accessories

BKE-2010 Editing Keyboard  
BKE-2011 Editing Keyboard  
BKE-2020 Expanded RS-422A Interface Board  
BKE-2030 NTSC Color Framing Detector Board  
BKE-2031 PAL Color Framing Detector Board

#### Optional Peripherals

BVS-A1201 Analog Audio Routing Switcher  
BVS-V1201 Analog Video Routing Switcher

#### Specifications

##### Power requirements:

AC 100 to 240 V,  $\pm 10\%$  48 to 64 Hz

##### Power consumption:

28 W max. including all BKE boards

##### Operating temperature:

0 to 35 °C (32 to 95 °F)

##### Storage temperature:

-40 to 60 °C (-40 to 140 °F)

##### Dimensions (W x H x D)

###### Processor:

390 x 93 x 265 mm  
(16 3/4 x 5 1/4 x 13 7/8 inches)

###### Keyboard:

424 x 65 x 258 mm  
(16 3/4 x 2 5/8 x 10 1/4 inches)

#### Mass

##### Processor:

11 kg (25 lb 4 oz)

##### Keyboard:

2.3 kg (5 lb 1 oz)

##### Editing reference:

CTL, RTC, SMPTE/EBU Time Code

##### Editing accuracy:

$\pm 0$  frame with time code

##### Memory capacity:

998 events

##### VTR interface:

RS-422A 9-pin remote connector

##### Switcher interface:

RS-422A 9-pin remote connector

##### Mixer interface:

9-pin/15-pin serial/parallel connectors

##### GPI:

8 ports, programmable pulse output

##### External edit control:

2 x RS-232C programmable BAUD rate and bit

##### Video and reference signal:

External sync input -0.2 to 5.0 Vp-p 1.0

$\pm 0.2$  Vp-p

video signal, 75  $\Omega$

Reference video input -0.1  $\pm 0.2$  Vp-p, 75  $\Omega$

(when BKE-2030/2031 fitted)

VDU output 1.0 V  $\pm 0.3$  Vp-p 75  $\Omega$

## Editing Control Units

# BVE-700 Editing Control Unit

### Features

●Compact and affordable edit controller designed specifically for use in HD post-production applications (requires the optional BKE-701 plug-in HD switcher board) ●Plug-in HD switcher board (BKE-701) provides switcher functions including effects (cut, dissolve, wipe and mosaic), key (key on/off, key transition, matte fill and external key), and wipe modify (border on/off, border width, border color and softness) ●Up to four VTRs can be controlled in an A/B roll edit ●Excellent operational convenience ●Dual search dial operation enables quick and easy access to edit points ●External switcher and audio mixer interface ●Eight-channel audio editing ●User-friendly control panel ●Pre-read editing ●Absorption of timing delays caused by up/down converters or other external equipment ●Stores up to 1000 events in the internal EDL ●Compact processor unit (3U high) including the HD switcher board

### Supplied Accessories

Connection cable (processor-control panel) (1)  
Operation manual (1)  
Installation manual (1)  
Use's guide (1)

### Optional Accessories

BKE-701 HD Switcher Board

### Specifications

#### BVE-700

Power requirements:

100 to 240 V, 50/60 Hz

Power consumption:

250 W

Operating temperature:

5 °C to 40 °C (41 °F to +104 °F)

Storage temperature:

-20 °C to +60 °C (-40 °F to +140 °F)

Dimensions (W × H × D)

Processor:

440 × 132.4 × 520 mm

(17 3/8 × 5 1/4 × 20 1/2 inches)

Panel:

440 × 87 × 340 mm

(17 3/8 × 3 1/2 × 13 1/2 inches)

Mass

Processor:

10 kg (22 lb 0.7 oz)

Panel:

4 kg (8 lb 13 oz)

Reference signal:

BNC, 1080/47.96, 1080/48, 1080/50,

1080/59.94, 1080/60, 525/59.94, 625/50 Hz

VTR control:

RS-422A x4, Player-1, 2, 3, and Recorder

External switcher control:

RS-422A Sony switcher protocol

Audio mixer control:

RSS-422A ESAM-II

Multi-event EDL:

1000 events

#### BKE-701 HD switcher board

Video format:

1080/60i, 59.94i, 50i

1080/30P, 29.97P, 25P, 24P, 23.97P

HD SDI video inputs:

5 inputs

Player 1, 2, 3/AUX (selectable), Title,

Recorder

HD SDI video outputs:

3 outputs

2 video out, 1 monitor out

Effect type:

Cut, Dissolve, Wipe, Mosaic

Key:

Key on/off

Key transition

Matte fill

External key

Wipe modify:

Border on/off

Border width

Border color

Softness

## Editing Control Units

### BVE-9100 Hybrid Editing Systems

#### Features

•Fast CPU processing—32 bit CPU running at 20 MHz  
 •Large memory capacity—Approx. 4.5 Mbytes •Standard color display monitor interface •Optional color corrector interface for BVX-D10 •Modular design—system expansion via a variety of optional BKE boards/units and BZE software •Full system interface •Parallel or serial video switcher interface •Parallel or serial audio mixer interface •Direct DME interface •14 VTR/DDR control (can assign up to eight VTRs as recorders or 12 as players) •Four standard GPI ports and 32 optional GPI ports •Two standard RS-232C printer ports •Full list management •Four channel audio control  
 •DMC/switcher/mixer/color corrector learn functions •Two types of editing keyboards; qwerty style and dedicated style •16 user programmable keys •Keyboard reassignment function •ACTION TRACK (enhanced timetrack operation) capability •Sub-keyboard with 30 × 3 assignable keys •Character superimposing on picture monitor •Self-diagnostics



Photo shows BVE-9100 system

#### Supplied Accessories

3.5 inch micro floppy disk with based program (1)  
 System Disk (2)  
 AC power cord (1)  
 Extension board (1)  
 15-pin D-sub connector (male) (1)  
 25-pin D-sub connector (male) (1)  
 9-pin D-sub connector (male) (1)  
 Rack angle set (1)  
 Plug holder (1)  
 Indicator label (1)  
 Operation and maintenance manual (1)

#### Optional Accessories

BKE-9000K1 Expansion Kit  
 BKE-9002 4x Intelligent Device Controller Interface  
 BKE-9011 Video Switcher/Audio Mixer/Monitor Switcher Interface  
 BKE-9014 9-Pin Interface Board  
 BKE-9107 Hard Disk Unit  
 BKE-9400A Editing Keyboard (Qwerty type)  
 BKE-9401 Sub Keyboard  
 BKE-9402 Programmable Control Panel  
 BKE-9410 Editing Keyboard (dedicated)  
 BKE-9600 Intelligent Device Controller  
 BKE-9601 Time Code Generator/Reader  
 BKE-9602 Character Superimposer  
 BKE-9603 Expansion RAM Board  
 BKE-9604 Component Character Superimposer  
 BKE-9611 9-pin VTR Control/Character Superimposer Control ROM Kit  
 BKE-9612 Sony Multicassette System Control ROM  
 BKE-9631 Parallel Switcher Interface  
 BKE-9632 Parallel Mixer Interface  
 BKE-9633 Monitor Switcher Interface  
 BKE-9651 General Purpose Interface Kit (16 ports)  
 BZE-9101 Basic Operating Program  
 BZE-9102 Advanced Operating Program  
 BZE-9124 Multi-Format Operating Software  
 BZE-9601 Switcher Control Program

BZE-9602 Switcher Control Program  
 BZE-9603 Switcher Control Program for VVG Kadenza  
 BZE-9604 Switcher Control Program  
 BZE-9605 Switcher Control Program  
 BZE-9606 Switcher Control Program  
 BZE-9611 Mixer Control Program  
 VMC-30V Cable 9-pin to 9-pin Color Monitor  
 Cable for BVE-9000/9100  
 RCC-G Cables 9-pin/9-pin Cable

#### Specifications

Power requirements:  
 AC 100 to 240 V, 50/60 Hz ( $\pm 10\%$ )  
 Power consumption:  
 60 W (incl. 7 BKE boards)  
 Operating temperature:  
 5 to 35 °C (41 to 95 °F)  
 Storage temperature:  
 -20 to 60 °C (-4 to 140 °F)  
 Dimensions: (W × H × D)  
 424 × 220 × 480 mm  
 (16 3/4 × 8 3/4 × 19 inches)  
 Mass:  
 21 kg (46 lb 5 oz) excl. optional boards  
 System:  
 32-bit microprocessor with 4 Mbytes  
 DRAM and  
 512 kbytes SRAM  
 Editing reference:  
 CTL, LTC and VITC (SMPTE time codes)  
 Editing accuracy:  
 $\pm 0$  frame in time code operation (normal play mode)  
 EDL memory capacity:  
 6000 edits/lines

Non-linear Editing System

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Non-linear Editing System

## Non-linear Editing System

### DMW-S05NL Nonlinear Production System (MPEG IMX based model)

Nonlinear production system — an MPEG IMX based model of the XPRI series, which operates on various MPEG-2 data rates. Composed of a simple system configuration, this system offers powerful editing features and superb quality. It adopts the same editing software and optional control panels as those used for the HD/SD high-end XPRI series but at a much lower cost. A flexible upgrade path to a non-compressed SD or a compressed/non-compressed HD system is also available.

#### Features

- Use of MPEG-2:4:2:2P@ML allows interconnection with other MPEG devices for seamless integration into the MPEG world
- Supports a data rate of 50 Mb/s for MPEG IMX
- Connectable to MPEG IMX VTRs and other MPEG devices for streaming transfer with the DMW-IF01 SDTI Interface Board fitted
- High picture quality provided at an affordable cost due to the use of MPEG compression
- Built-in 108GB storage offers up to 4.5 hours of recording
- A/V connectors built into the rear of the workstation are laid out for easy system connections
- A familiar operation environment based on industry standard GUI designs and consistency with the XPRI high-end models
- A variety of unique control panels interact with the GUI to provide direct access to frequently used features
- uncompressed SD, HDCAM and uncompressed HD are available as options
- Sharing data and retrieving data from external storage devices over network such as SAN
- Two times normal speed transfer (with DMW-IF01 SDTV I/F Board)
- Dual digitize function

#### Supplied Accessories

Digital Media Workstation (1)  
Editing Software (1)  
Installation Manual (1)  
Operation Manual (Online) (1)  
Rack Mount Kit (1)  
AC Cable (1)

#### Dimensions (W x H x D)

Digital Media Workstation:  
440 x 220 x 610 mm (17 3/8 x 8 3/4 x  
24 1/3 inches)

#### Mass

Digital Media Workstation:  
27 kg (59 lb 9 oz)

#### Optional Panels

DMW-C2 XPRI Jog and Shuttle Control Unit  
DMW-C3 XPRI Audio Control Unit  
DMW-C1 XPRI Media Control Bar Unit  
DMW-C4 XPRI Track Ball Control Unit

#### Optional Boards

DMW-IF01 XPRI SDTI Interface Board  
DMW-IF02 XPRI HDTV Interface Board  
DMW-ST001 Fiber Channel Interface Board

#### Optional Peripherals

DMW-ST001 Fibre Channel Storage Unit

#### Specifications

##### General

##### Power requirements

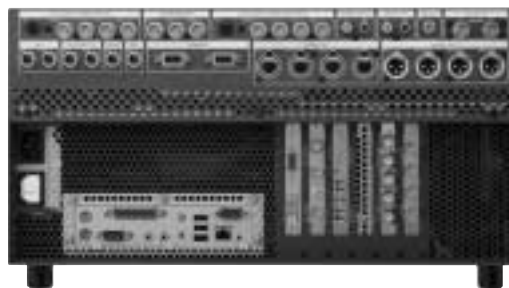
Digital Media Workstation:  
AC 90 V to 132 V / 180V to 264 V, 47 Hz  
to 63 Hz

##### Power consumption

Digital Media Workstation:  
270 W



VTR, displays and speakers are not included in DMW-S05NL.



# xpri™

## Non-linear Editing System

### DMW-C1 XPRI Media Control Bar Unit

Unique control panel interacts with the GUI to provide direct access to frequently used features. The control panel offers intuitive operation for the XPRI.

#### Features

- Provides eight volume pots and two buttons to assign functions
- Easy-to-use design with variable angle setting pedestal
- Features can be assigned on the panel from GUI



#### Applicable Models

DMW-S05NL Nonlinear Production System  
(MPEG IMX based model)

#### Dimensions (W x H x D):

265 x 74 x 94.5 mm (10 2/1 x 3 x 3 3/4 inches)

#### Supplied Accessories

Installation Manual (1)  
Driver Software (1)

#### Mass:

700 g (1 lb 9 oz)

#### Specifications

##### General

##### Power requirements:

Supplied from the DMW-C2 Jog & Shuttle  
Control Panel or  
DMW-C3 Audio Control Panel through the  
USB connector

##### Operating temperature:

+ 10 °C to + 35 °C (+ 50 °F to + 95 °F)

##### Storage temperature:

- 20 °C to + 60 °C (- 4 °F to + 140 °F)

##### Operating humidity:

20% to 80%

### DMW-C2 XPRI Jog and Shuttle Control Unit

Unique control panel interacts with the GUI to provide direct access to frequently used features. The control panel offers intuitive operation for the XPRI.

#### Features

- Provides jog /shuttle dial and transport control to control VTRs and material
- Jog/shuttle dial is equivalent to that used in Sony VTRs
- Equipped with USB-Hub function



#### Applicable Models

DMW-S05NL Nonlinear Production System  
(MPEG IMX based model)  
DMW-S06NL XPRI Mobile Nonlinear Editing  
Software

#### Storage temperature:

- 20 °C to + 60 °C (- 4 °F to + 140 °F)

#### Operating humidity:

20% to 80%

#### Dimensions (W x H x D):

210 x 68.3 x 264.1 mm (8 3/8 x 2 3/4 x 10 1/2 inches)  
(with palm rest attached)

#### Supplied Accessories

Installation Manual (1)  
Driver Software (1)  
USB Cable (1)

#### Mass:

900 g (1 lb 15 oz)

#### Specifications

##### General

##### Power requirements:

15 V DC

##### Power consumption:

3.8 A

##### Operating temperature:

+ 10 °C to + 35 °C (+ 50 °F to + 95 °F)

## Non-linear Editing System

### DMW-C3 XPRi Audio Control Unit

Unique control panel interacts with the GUI to provide direct access to frequently used features. The control panel offers intuitive operation for the XPRi.

#### Features

- Provides eight channels plus one master flying faders with touch sensor for intuitive operation
- Offers mute switch and assignable key for a variety of operations
- Equipped with USB-Hub function



#### Applicable Models

DMW-S05NL Nonlinear Production System (MPEG IMX based model)  
DMW-S06NL XPRi Mobile Nonlinear Editing Software

#### Supplied Accessories

Installation Manual (1)  
Driver Software (1)  
USB Cable (1)

#### Specifications

##### General

Power requirements:  
15 V DC  
Power consumption:  
3.8 A  
Operating temperature:  
+ 10 °C to + 35 °C (+ 50 °F to + 95 °F)  
Storage temperature:  
- 20 °C to + 60 °C (- 4 °F to + 140 °F)  
Operating humidity:  
20% to 80%

#### Dimensions (W x H x D):

267 x 65.2 x 207 mm (10 5/8 x 2 5/8 x 8 1/4 inches)

#### Mass:

1.7 kg (3 lb 11 oz)

### DMW-C4 XPRi Track Ball Control Unit

Unique control panel interacts with the GUI to provide direct access to frequently used features. The control panel offers intuitive operation for the XPRi.

#### Features

- Equipped with well-established trackball and Z ring that are adopted in the DME Series
- It can be used to position the 3D transform of the DME directory intuitively
- It can also be used to adjust and modify color correction



#### Applicable Models

DMW-S05NL Nonlinear Production System (MPEG IMX based model)

#### Supplied Accessories

Installation Manual (1)  
Driver Software (1)

#### Specifications

##### General

Power requirements:  
Supplied from the DMW-C2 Jog & Shuttle Control Panel or  
DMW-C3 Audio Control Panel through the USB connector  
Operating temperature:  
+ 10 °C to + 35 °C (+ 50 °F to + 95 °F)  
Storage temperature:  
- 20 °C to + 60 °C (- 4 °F to + 140 °F)

#### Operating humidity:

20% to 80%

#### Dimensions (W x H x D):

210 x 58.8 x 225.9 mm (8 3/8 x 2 3/8 x 9 inches)  
(with palm rest attached)

#### Mass:

700 g (1 lb 9 oz)

# Non-linear Editing System

## DMW-C5 XPRI Editing Control Panel

Editing Control Panel designed for news gathering. Its panel layout is inherited from the style of linear editors equipped with a jog shuttle dial. User-friendly panel layout is ideal for users who are familiar with linear editing system.

### Specifications

#### General

Power requirements:

100-240 V

Power consumption:

19.5 W

Operating temperature:

+ 10 °C to + 35 °C (+ 50 °F to + 95 °F)

Storage temperature:

- 20 °C to + 60 °C (- 4 °F to + 140 °F)

Operating humidity:

20% to 80%

Dimensions (W x H x D):

63 x 30.5 x 140 mm (2 1/2 x 1 1/4 x 5 5/8 inches)

Mass:

700 g (1 lb 9 oz)



Non-linear Editing System

## Non-linear Editing System

# DMW-EX01 Time Code (TC) and GPI interface Unit for the XPR1 system

The DMW-EX01 TC/GPI Interface Unit adds TC Input/Output and GPI output ability to the XPR1 system. The TC input allows the XPR1 system to accept external time code. In studio editing and live programming, this allows live content to be recorded to the XPR1 system with the time code synchronized to a house TC. The TC output allows the time code of a source selected on the XPR1 system to be output to an external device. By supplying this time code and the video output from the XPR1 editor to an external TC reader, the time code can be superimposed and viewed on a video monitor during editing. The GPI output is a useful tool when titles must be superimposed on the XPR1 program using a character generator or a switcher's Downstream Key.

### Features

- TC import/Export
- GPI Import/Export
- GPI contact provides Make/Open/Pulse modes
- Up to six DMW-EX01 can be cascaded
- 1U high
- 2.5 W low power consumption
- Power is supplied from XPR1 Workstation

### Supplied Accessories

- USB cable (1)
- Installation Manual (1)

### Specifications

#### General

Power requirements:

- 5V DC (supplied via USB bus)

Dimensions (w/h/d):

- 110 x 43.6 x 144.5 mm (4 3/8 x 1 3/4 x 5 3/4 inches) (Excluding projections)

Mass:

- 700 g (1 lb 9 oz)

#### Input/output connectors

Reference INPUT:

- BNC type x 1, 75  $\Omega$ , Bi-Level/Tri-Level sync signal

Bi-Level:

- 0.3 Vp-p  $\pm 30\%$ , 75  $\Omega$ , sync negative

Reference loop-through output:

- BNC type x 1, automatic termination

TIME CODE IN:

- BNC type x 1, conforming to SMPTE/EBU
- Input time code can be read in the range 1/5 to 24 times normal speed.
- 0.5 to 5 Vp-p, 3.3 k, 75  $\Omega$ , unbalanced

TIME CODE OUT:

- BNC type x 1, conforming to SMPTE/EBU
- 2.2 Vp-p  $\pm 3.0$  dB, unbalanced (600  $\Omega$  termination)

GPI:

- D-sub 25-pin (female), four input ports, eight output ports
- +5V TTL level input
- Photocoupler output (max. 10 mA/40 V DC per port)

Others:

- ID setting selector six positions



## Non-linear Editing System

### DMW-EX02 9-pin Remote Interface Unit for the XPRI System

Via the DMW-EX02 9-pin Remote Interface Unit, the XPRI system can be controlled directly from a Sony BVE-9100 or BVE-2000 Editing Controller. The XPRI system is recognized as a source device and can be controlled with frame accuracy. This allows operators to easily dub edits performed on the XPRI to tape or use them as source material in a linear editing system directly from the XPRI's timeline.

#### Features

- Compact 1U high and 1/4 rack width
- 2.5 W low power consumption
- Power supplied from XPRI Workstation
- Conforms to Sony 9-pin remote protocol
- Device mode or controller mode can be selectable
- Up to 6 DMW-EX02s can be cascade connected

#### Supplied Accessories

USB cable (1)  
Installation Manual (1)

#### Specifications

##### General

##### Power requirement:

5V DC (supplied from the XPRI workstation via USB bus)

##### Power consumptions:

Less than 2.5 W

##### Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

##### Storage temperature:

-20 °C to +60 °C (-4 °F to 114 °F)

##### Operating humidity:

20% to 90%

##### Dimensions (w/h/d):

110 x 43.6 x 144.5 mm (4 3/8 x 1 3/4 x 5 3/4 inches) (Excluding projections)

##### Mass:

700 g (1 lb 9 oz)

##### Input/output connectors

##### USB

Series B receptacle x 1, compliance with USB 1.1

##### Reference video in:

BNC type x1, 75  $\Omega$

HDTV system:: HD tri-level sync

SDTV system: Analog black burst or analog sync

##### Reference loop-through output:

BNC type x 1, automatic termination

##### Remote:

D-sub 9-pin (female) x 2, RS-422A compliance with Sony 9-pin remote protocol

##### ID switch:

Rotary switch x 1, 6 positions of ID setting selection



## Non-linear Editing System

### DMW-IF01 XPRI SDTI Interface Board

DMW-IF01 is a PCI card that provides SDI and SDTI interface for Non-linear Production System XPRI.

#### Features

- Provides a pair of SDTI-CP input/output to input/output streaming signals from/to MPEG50 VTR and HDCAM VTR

#### Applicable Models

DMW-S05NL Nonlinear Production System  
(MPEG IMX based model)

#### Supplied Accessories

Installation Manual (1)

#### Specifications

##### General

Storage temperature:

10 to +35 °C (50 to 95 °F)

Operation temperature:

10 to 95% (no condensation)

Dimensions (W x H x D):

326 x 107 x 20 mm (12 7/8 x 4 1/4 x

13/16 inches)

Mass:

300 g (10 oz)

##### Inputs/outputs

Digital video input:

SDTI interface (BNC type, 1),

conforming to SMPTE305M, 270 Mb/s

Reference input

REF IN connector (BNC type, 1),

0.286 V p-p, 75  $\Omega$ ,

tri-level sync signal: 0.6 Vp-p, 75  $\Omega$

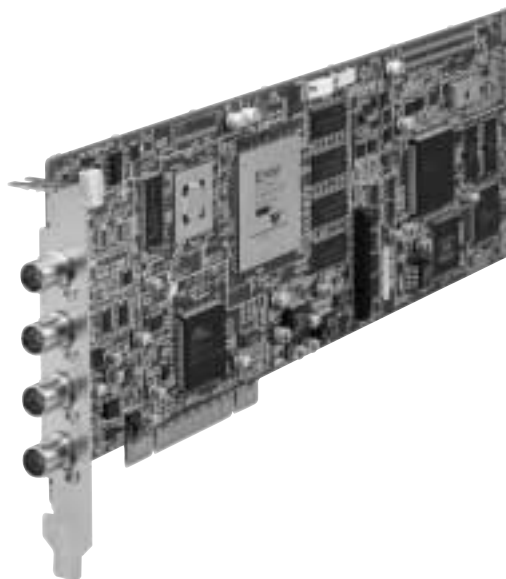
Digital video output:

SDTI interface (BNC type, 1),

conforming to SMPTE305M, 270 Mb/s

Reference output:

Loop-through connector (BNC type, 1)



## Non-linear Editing System

### DMW-IF02 XPRI HDTV Interface Board

DMW-IF02 is a PCI card that provides HD SDI interface for Non-linear Production System XPRI.

#### Features

- Provides a pair of HD-SDI (1.5 Gb/s) input/output to input/output HD base band signals
- Complied with 1080/60i, 1080/50i, and 1080/24p signals
- Integrated with a CODEC daughter card to compress/decompress non-compressed HD to/from HDCAM compression
- Equipped with HDCAM CODEC

#### Applicable Models

DMW-S05NL Nonlinear Production System  
(MPEG IMX based model)

#### Supplied Accessories

Installation Manual (1)  
Driver Software (1)

#### Specifications

##### General

Storage temperature:  
+10 °C to +35 °C (+50 °F to +95 °F)

Operation temperature:  
10% to 95% (no condensation)

Dimensions (W x H X D):  
326 x 107 x 20 mm (12 7/8 x 4 1/4 x  
13/16 inches)

Mass:  
300 g (10 oz)

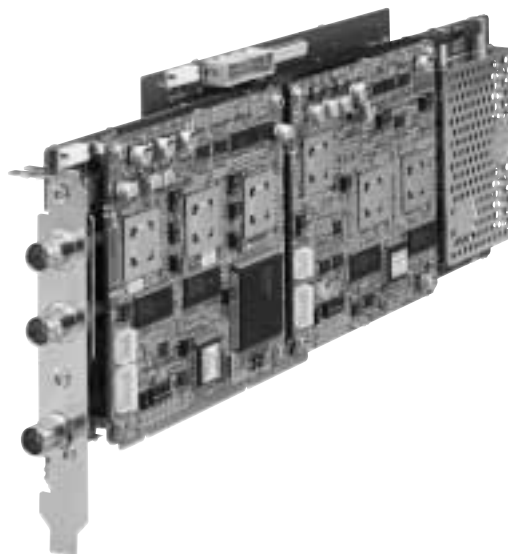
##### Inputs/outputs

Digital video input:  
HD SDI IN (BNC,1)

Reference input  
REF IN connector (BNC type, 1),  
0.286 Vp-p, 75  $\Omega$ ,  
tri-level sync signal: 0.6 Vp-p, 75  $\Omega$

Digital video output:  
HD SDI OUT (BNC,1)

Reference output:  
Loop-through connector (BNC type, 1)



Non-linear Editing System

## Non-linear Editing System

### DMW-NR01 License for XPRI Network Rendering Function

This software allows the XPRI system to use a Network Rendering function.

#### Features

- Multiple rendering PCs connected over Gigabit Ethernet network permit distributed processing for accelerated rendering speeds
- Background rendering operation allows parallel editing and rendering
- Multiple sequences can be rendered simultaneously

One license is required for each client PC.

### DMW-RT01 SDTV Real-time Video Processing Board

The DMW-RT01 Real-time Video Processing Board for the XPRI SD system improves editing efficiency and speeds up operation. Packaged into a single compact PCI card, the DMW-RT01 supports real-time effect processing of Non-compressed SD, MPEG IMX compressed signals.

#### Features

- Real-time capability
- Real-time effects on SD material, uncompressed and compressed
- Real-time processing of a variety of effect patterns is possible
- Complex processing such as inserting a 3D transition and a key overlay between two color-corrected channels is achieved in real time
- Accelerated processing
- Plays a vital role when editing with more than three layers of SD material by increasing processing speed
- Adds 33 sophisticated effects patterns
- Secondary color correction
- An optional supplementary software package gives the XPRI system capability to apply even more effects
- The XPRI system can be upgraded with effects as they become available



#### Specifications

##### General

Power requirements:

±12V, 5V, 3.3V DC

Power consumption:

4.8A: 3.3V, 4.7A: 5V, 0.4A: 12V, 0.1A: -12V

Performance temperature:

10°C to 35°C (50°F to 95°F)

Storage temperature:

-20°C to +60°C (-4°F to 140°F)

Storage humidity:

20% to 80%

Dimensions (w/h/d):

326 x 107 x 20 mm (12 7/8 x 4 1/4 x 13/16 inches)

Mass:

500 g (1 lb 2 oz)

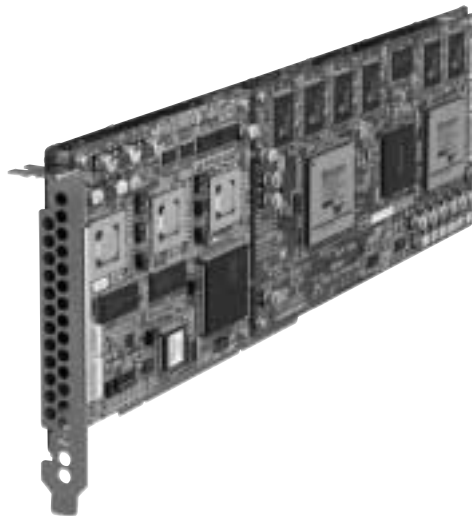
## Non-linear Editing System

### DMW-RT02 Real-time Video Processing Board

The DMW-RT02 Real-time Video Processing Board improves editing efficiency and speeds up operation of the XPRI system. Packaged into a single compact PCI card, the DMW-RT02 supports HDCAM compression, non-compressed SD, MPEG IMX compression, and offers real-time HDCAM effects and high-speed rendering for HD Uncompressed effects.

#### Features

- Real-time capability — Capability of real-time effects on HDCAM compressed material and SD material, uncompressed and compressed; Real-time processing of a number of effect patterns is possible; When using these real-time effects, complex processing such as inserting a 3D transition and a key overlay between two color-corrected channels becomes a reality
- Accelerated processing — Uncompressed HD material is processed using software rendering, acceleration can be experienced; Plays a vital role when editing with more than three layers of HDCAM compressed material and SD material by increasing processing speed
- Additional effects — A variety of additional sophisticated effects come standard; An optional supplementary software package gives the XPRI system capability to apply even more effects; The XPRI system can be upgraded with effects as they become available



Non-linear Editing System



Non-linear Editing System

## Editor/DME/Switcher Accessories

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BKE-2020 .....	460	MKE-8020A .....	474	MKS-8050 .....	495
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BKE-9410 .....	463	MKS-2440 .....	481	MKS-8170M .....	499
BKE-9601 .....	463	MKS-2470 .....	481	MKS-8210A .....	499
BKE-9602 .....	463	MKS-2700 .....	482	MKS-8210K1 .....	499
BKE-9603 .....	464	MKS-8010A .....	482	MKS-8210K2 .....	500
BKE-9604 .....	464	MKS-8011 .....	483	MKS-8420M .....	500
BKE-9631 .....	464	MKS-8013 .....	483	MKS-8440A .....	500
BKE-9632 .....	464	MKS-8014 .....	484	MKS-8440K1 .....	501
BKE-9633 .....	465	MKS-8015 .....	484	MKS-8700 .....	501
BKE-9651 .....	465	MKS-8017 .....	485	MKS-8701 .....	502
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BZE-9124 .....	466	MKS-8020 .....	486	MKS-9012A .....	504
BZE-9601 .....	466	MKS-8021 .....	487	SWC-5002 .....	505
BZE-9602 .....	466	MKS-8022 .....	487	SWC-5005 .....	505
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Editor/DME/Switcher Accessories

BKAW-550 PC Video Interface Module



Applicable Models

AWS-G500 Live Content Producer

Specifications

RGB

D-sub Shrunked 15-pin Type x 2 (Female)

Preset Signal

1024x768 XGA VESA 60Hz

fH

48.363 [kHz]

fV

60.004 [Hz]

Dot Clock

65.000

Sync H

Neg

Sync V

Neg

1024x768 XGA VESA 75Hz

fH

60.023

fV

75.029

Dot Clock

78.75

Sync H

Pos

Sync V

Pos

1280x1024 SXGA VESA 60Hz

fH

63.981

fV

60.02

Dot Clock

108

Sync H

Pos

Sync V

Pos

1280x1024 SXGA VESA 75Hz

fH

79.976

fV

75.025

Dot Clock

135

Sync H

Pos

Sync V

Pos

BKAW-570 SD Video Interface Module

Applicable Models

AWS-G500 Live Content Producer

Specifications

Composite

BNC Type x 2

Video: 1.0 Vp-p, 75  $\Omega$ , Sync negative

S-Video

DIN Type x 2

Y: 1.0 Vp-p, 75  $\Omega$ , Sync negative

C: 0.286 Vp-p at burst, 75  $\Omega$ , (NTSC)

C: 0.3 Vp-p at burst, 75  $\Omega$ , (PAL)

i.LINK

IEEE 1394 6-pin Type x 2

IEC 61883-2 equiv.

HDD Port

i.LINK: IEEE 1394 S400 6-pin Type x 1

HDD IF: SBP2



## Editor/DME/Switcher Accessories

### BKDF-701 Digital/Analog Input Board (NTSC/PAL)

Digital/analog input board for NTSC/PAL for use with  
DFS-700/700P DME Switcher

Applicable Models  
DFS-700A DME Switcher  
DFS-700AP DME Switcher

### BKDF-702 Analog Composite Input Board (NTSC)

Analog composite input board for NTSC for use with  
DFS-700 DME switcher

Applicable Models  
DFS-700A DME Switcher

### BKDF-702P Analog Composite Input Board (PAL)

Analog composite input board for PAL for use with  
DFS-700P DME switcher

Applicable Models  
DFS-700AP DME Switcher

### BKDF-711 2nd Channel DME Board

2nd channel DME board for use with DFS-700/700P DME  
switcher

Applicable Models  
DFS-700A DME Switcher  
DFS-700AP DME Switcher

## Editor/DME/Switcher Accessories

### BKDF-712 3D Video Mapping Effects Board

3D video mapping effects board for use with  
DFS-700/700P DME switcher

Applicable Models  
DFS-700A DME Switcher  
DFS-700AP DME Switcher

### BKDS-9160 24-Output Board

The BKDS-9160 adds 24 outputs to the 24 outputs  
standard on the DVS-9000, making the total number of  
outputs 48.

Applicable Models  
DVS-9000 Production Switcher Processor

### BKDS-9161 8 Monitor Output Board

The BKDS-9161 is an optional SD SDI output board. With  
this option fitted, the DVS-9000 switcher processor offers  
eight re-clocked outputs to which the primary input signals  
can be routed with minimum delay. Those outputs are  
useful to monitor every primary input signal or to re-entry  
the primary input signals through the external processors  
such as color correctors.

NOTE: Unlike the BKDS-9160, those monitor outputs cannot handle the  
processed signals.

Applicable Models  
DVS-9000 Production Switcher Processor

### BKDS-9162 12-Output Board

The BKDS-9162 adds 12 outputs to the 12 outputs  
standard on the DVS-9000SF, making the total number of  
outputs 24.

Applicable Models  
DVS-9000SF Production Switcher Processor

## Editor/DME/Switcher Accessories

### BKDS-9210 Mix/Effect Board

The BKDS-9210 is an optional mix/effects board set. With this option installed, the DVS-9000 is expandable from two to four M/Es, and the DVS-9000SF is expandable from one to two M/Es

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor

### BKDS-9470 DME Board Set

By installing the BKDS-9470, the DVS-9000 Series Switcher processors offer four channels of high-quality DME.

#### Features

- 4 DME channels
- Video, Key and SDI external video inputs per channel
- External video input for use as the background or border/trail source
- The four SDI monitor outputs allow monitoring of the video with graphic, the video without graphic, or the key
- Y/C/K 10-bit processing
- High-performance pixel-based anti-alias filter
- 8 x 8 multi-point interpolation
- Frame base processing
- 2D, 3D and non-linear effects
- Digital SKETCH™, Digital SPARKLE™, Color Corrector and up to four channels of Intersect Combine
- Powerful lighting effects

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor

#### Optional Accessories

BZS-9471 Texture Lighting Software

### BKE-2010 Editing Keyboard

Editing keyboard for BVE-2000

#### Applicable Models

BVE-2000 Editing Control Unit

## Editor/DME/Switcher Accessories

### BKE-2011 Editing Keyboard

Qwerty-type editing keyboard for BVE-2000

Applicable Models  
BVE-2000 Editing Control Unit

Editor/DME/Switcher Accessories

### BKE-2020 Expanded RS-422A Interface Board

Expanded RS-422A interface board for BVE-2000

Applicable Models  
BVE-2000 Editing Control Unit

### BKE-2030 NTSC Color Framing Detector Board

NTSC color framing detector board for BVE-2000

Applicable Models  
BVE-2000 Editing Control Unit

### BKE-2031 PAL Color Framing Detector Board

PAL color framing detector board for BVE-2000

Applicable Models  
BVE-2000 Editing Control Unit

## Editor/DME/Switcher Accessories

### BKE-701 HD Switcher Board

HD switcher board for BVE-700

Applicable Models  
BVE-700 Editing Control Unit

### BKE-9000K1 Expansion Kit

Expansion kit for BVE-9100 hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BKE-9002 4x Intelligent Device Controller Interface

4x intelligent device controller interface for BVE-9100  
hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BKE-9011 Video Switcher/Audio Mixer/Monitor Switcher Interface

Video switcher/audio mixer/monitor switcher interface for  
BVE-9100 hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

## Editor/DME/Switcher Accessories

### BKE-9014 9-Pin Interface Board

9-pin interface board for BVE-9100 hybrid editing systems

#### Features

- Allows the BVE-9100 to interface with Sony VTRs, Sony DMEs, Sony BVX-D10 color corrector, GVG 100, Ampex VPR-3/6 or Kaleidoscope
- By exchanging EPROMs (supplied) on the board, possible combination and number of the controlled devices are changed(\*)

(\*)Please ask your nearest Sony office about further information

#### Applicable Models

BVE-9100 Hybrid Editing Systems

### BKE-9107 Hard Disk Unit

Hard disk unit for use with BVE-9100 hybrid editing systems

#### Applicable Models

BVE-9100 Hybrid Editing Systems

### BKE-9400A Editing Keyboard (Qwerty type)

Editing keyboard for use with BVE-9100 hybrid editing systems. A 15-pin (30 m) keyboard cable is supplied with the BKE-9400A and BKE-9410.

#### Applicable Models

BVE-9100 Hybrid Editing Systems

### BKE-9401 Sub Keyboard

Sub keyboard for BVE-9100 hybrid editing systems

#### Applicable Models

BVE-9100 Hybrid Editing Systems

## Editor/DME/Switcher Accessories

### BKE-9402 Programmable Control Panel

Programmable control panel for BVE-9100 hybrid editing systems

**Applicable Models**

BVE-9100 Hybrid Editing Systems

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### BKE-9410 Editing Keyboard (dedicated)

Editing keyboard for BVE-9100 hybrid editing systems

**Applicable Models**

BVE-9100 Hybrid Editing Systems

**Supplied Accessories**

15-pin (30 m) keyboard cable (1)

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### BKE-9601 Time Code Generator/Reader

Time code generator/reader for use with BVE-9100 hybrid editing systems

**Applicable Models**

BVE-9100 Hybrid Editing Systems

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### BKE-9602 Character Superimposer

Character superimposer for use with BVE-9100 hybrid editing systems

## Editor/DME/Switcher Accessories

### BKE-9603 Expansion RAM Board

Expansion RAM board for use with BVE-9100 hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

Editor/DME/Switcher Accessories

### BKE-9604 Component Character Superimposer

Component character superimposer for use with BVE-9100 hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BKE-9631 Parallel Switcher Interface

Parallel switcher interface for use with BVE-9100 hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BKE-9632 Parallel Mixer Interface

Parallel mixer interface for use with BVE-9100 hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

## Editor/DME/Switcher Accessories

### BKE-9633 Monitor Switcher Interface

Monitor switcher interface for use with BVE-9100 hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BKE-9651 General Purpose Interface Kit (16 ports)

General purpose interface kit for use with BVE-9100 hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BZDM-9050 Texture Lighting Software

Texture Lighting Software for the Sony Multi-format DME processor MVE-9000

#### Features

●The BZDM-9050 is Texture Lighting Software for use with the MVE-9000 Multi-format DME processor. Its texture lighting function enables you to map a texture pattern onto a DME effect using the spotlight function. The Real Lighting Function can add more realistic lighting to several Non-linear effect patterns. Up to four light sources are available per DME channel. With its Test Sphere Function, the position and brightness of light sources can be confirmed with ease.

\*V3.0 or later software is required in the MVE-9000 to install the BZDM-9050 Texture Lighting Software.

Applicable Models  
MVE-9000 Multi-format DME Processor

## Editor/DME/Switcher Accessories

### BZE-9102 Advanced Operating Program

Advanced operating program for use with BVE-9100  
hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BZE-9124 Multi-Format Operating Software

Multi-format operating software for use with BVE-9100  
hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BZE-9601 Switcher Control Program

Switcher control program for Sony HDS-1000T and  
GVG-100/300/1680 for use with BVE-9100 hybrid editing  
systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BZE-9602 Switcher Control Program

Switcher control program for GVG-200/2200/3000/4000  
for use with BVE-9100 hybrid editing systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

## Editor/DME/Switcher Accessories

### BZE-9604 Switcher Control Program

Switcher control program for Sony DVS-800/BVS-3000  
Series for use with BVE-9100 hybrid editing systems.

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BZE-9611 Mixer Control Program

Mixer control program for Sony VSP-8000, DMX-E3000,  
Granham-Patten GPS-600 Series, D-ESAM  
200/400/800/820 for use with BVE-9100 hybrid editing  
systems

Applicable Models  
BVE-9100 Hybrid Editing Systems

### BZS-2000M Upgrade Software from SD to Multi Format Configuration

The BZS-2000M software upgrades the MFS-2000  
switcher from the standard definition configuration to the  
multi-format configuration.

Applicable Models  
MFS-2000 Multi-Format Switcher Processor

### BZS-2440M Upgrade Software from SD to Multi Format Configuration

The BZS-2440M software upgrades the MKS-2440 Frame  
Memory Board Set from the standard definition  
configuration to the multi-format configuration.

Applicable Models  
MFS-2000 Multi-Format Switcher Processor

Editor/DME/Switcher Accessories

BZS-2470M DME Upgrade Software from SD to Multi Format Configuration

The BZS-2470M software upgrades the MKS-2470 DME Board Set from the standard definition configuration to the multi-format configuration.

Applicable Models  
MFS-2000 Multi-Format Switcher Processor

Editor/DME/Switcher Accessories

## Editor/DME/Switcher Accessories

# BZPS-8000 System Management Software

The BZPS-8000 running on a PC enables integrated management of all Sony live production products configured around and networked to the MVS/DVS Series Switchers. A software package for client and server PC.

### Features

- System data backup/restore — Setups, effects, images, etc. for MVS/DVS, PFV-SP and Router can be backup and restored at a time. Multiple system data can be handled easily per On-air program, per Event, per Operating clue, etc.
- File server — Individual file transfer control. File accessing from MVS/DVS panel.
- Status Monitoring/SNMP IF — System status (detected error per equipment) can be displayed on status menu. Convert MVS/DVS status to SNMP for Maintenance Manager.
- Server and Client — Server function is fundamental part: Gateway, File Server, SNMP IF, etc. Client function is user interface to operate System manager functions
- Launcher — There will be some plug-in application software available: MVS/DVS Setup, PFV-SP Setup, Router Setup, etc.

### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### Specifications

#### Server PC

Model:

Dell PowerEdge 350

CPU:

Celeron 850 MHz or greater

HDD:

40 GB or more

Memory:

512 MB or more

OS:

Red Hat Linux 7.2

\* At the initial setup of PC, VGA Display and PS/2 Keyboard will be required.

However, these are no longer required after the initial setup. RS-232C remote access from the other PC can update the software.

\* Dell PC Model is current and may be replaced with successor sooner or later.

So, we will keep you updated if some changes happen.

#### Client PC

CPU:

1 GHz or faster

Memory:

256 MB or more

Ethernet:

100Base-Tx

OS:

Windows 2000 Professional

\* The target schedule to support Windows XP will be informed later.

## Editor/DME/Switcher Accessories

### BZPS-8001 Switcher Setup Software

The BZPS-8001 for a client PC of the System Manager allows remote setup and control of MVS/DVS Series switchers. A software package for online software and offline software for a client PC.

#### Features

- Online — Setup MVS/DVS panel menu can be operated on PC remotely (online).
- Offline Setup — MVS/DVS setup can be created on PC anytime/anywhere (offline). Source assignment, name settings, etc. on Windows circumstance.
- Remote Control — Limited function control: e.g. Aux bus control, etc.
- Remote Diagnosis — Remotely control MVS/DVS diagnosis.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### BZS-8050 Editing Control Software (MVS-8000A, DVS-9000, MFS-2000)

The BZS-8050 Editing Control Software adds editing functions to the MVS-8000A series, the DVS-9000 series, and MFS-2000 production switcher systems. The BZS-8050 requires to be installed to the MKS-8010A System Control Unit, the MKS-2010, the MKS-2015, or the MKS-2017 Control Panels. The MKS-8050 or the MKS-2050 Editing Keyboard is required.

#### Applicable Models

MKS-2050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)  
MKS-8050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)

## Editor/DME/Switcher Accessories

### BZS-8250 Upgrade Software for the capability of Additinal Simple PGM/PST

The BZS-8250 software adds a simple PGM/PST function to the MVS-8000A Series Switcher system in order to configure 1.5/2.5/3.5 M/E system. Instead of the simple PGM/PST function, it can also add two DSKs.

#### Applicable Models

MVS-8000A Multi-Format Switcher Processor

MVS-8000ASF Multi-Format Switcher Processor

### BZS-9250 Additional simple PGM/PST function for the DVS-9000 Series switcher system

The BZS-9250 software allows the addition of a simple PGM/PST function to the DVS-9000 Series Switcher system to configure it as a 1.5/2.5/3.5 M/E system. It can also be used to add two DSKs but without the simple PGM/PST function.

#### Features

- Offers a simple PGM/PST function; BKGD A/B buses, two simple DSK and FTB
- Provides transition type; CUT, MIX, WIPE, SUPER MIX, NAM and PRESET COLOR MIX
- Provides Transition Preview function
- DSK supports Luminance Key and Linear Key
- DSK provides modifiers such as CLEAN MODE, KEY EDGE POSITION, INVERT, SHOW KEY, AUTO/SELF/SPLIT mode
- FTB (FADE TO BLACK) function
- Memory system for WIPE SNAPSHOT, KEY SNAPSHOT, SNAPSHOT, EFFECT
- Controlled from PGM/PST control area on the CCP-8000/9000 Series control panel
- When the BZS-9250 is used to add DSKs (DSK Mode), the additional DSKs are operated from MKS-8034DK or MKS-8032

#### Applicable Models

DVS-9000 Production Switcher Processor

DVS-9000SF Production Switcher Processor

## Editor/DME/Switcher Accessories

### BZS-9420 Color Correction Software for the DVS-9000 Series Switcher

#### Features

- 2-Channels of Primary RGB Color Correction and Secondary Color Corrections
- Primary RGB Color Correction for RGB color correction and Black/White balance, Gamma, Knee adjustments
- RGB Clip adjustment
- Luminance Process allows independent adjustment of the video signal based on three designated luminance levels
- Output Video Process function for video signal adjustment at the final CCR stage
- Spot Color Correction for video signal adjustment of a picked color
- YUV Clip adjustment
- Masks can be applied to Primary CCR, Luminance Process and Spot CCR stages
- Spot CCR mode or 6 Vector CCR mode can be selected in the setup menu

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor

### BZS-9471 Texture Lighting Software

Texture Lighting Software for the Sony DME board set  
BKDS-9470

#### Features

- The BZS-9471 is Texture Lighting Software for use with the BKDS-9470 DME board installed in the DVS-9000 Production switcher processor. Its texture lighting function enables you to map a texture pattern onto a DME effect using the spotlight function. The Real Lighting Function can add more realistic lighting to several Non-linear effect patterns. Up to four light sources are available per DME channel. With its Test Sphere Function, the position and brightness of light sources can be confirmed with ease.

\*V3.0 or later software is required in the BKDS-9470 to install the BZS-9471 Texture Lighting Software.

#### Applicable Models

BKDS-9470 DME Board Set

## Editor/DME/Switcher Accessories

### BZUC-8060 Keyer Control Software

The BZUC-8060 software is installed into the UCP-8060 Universal Control Panel. It provides keyer remote control capability for the MVS-8000/DVS-9000 Series Switcher.

#### Features

- The keyer control can be delegated to and adjusted from the UCP-8060 control panel
- Keyer status is displayed on the UCP-8060
- The UCP-8060 offers excellent operability with its color touch panel and four control knobs

### HK-PSU02 Power Supply Unit

Redundant power supply unit for the MFS-2000 Multi Format Switcher Processor and MKS-8010A System Control Unit

#### Applicable Models

MFS-2000 Multi-Format Switcher Processor  
MKS-8010A System Control Unit  
MVE-8000A Multi-Format DME Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Supplied Accessories

Installation Guide (1)

#### Specifications

##### General

Operating temperature:  
5 to 40 °C (41 to 104 °F)  
Storage temperature:  
- 20 to 60 °C (- 4 to 140 °F)  
Operating humidity:  
10% to 90% (nocondensation)

### HK-PSU04 Power Supply Unit

Power supply unit for the the MVS-8000 series.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVE-9000 Multi-format DME Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Supplied Accessories

Installation Guide (1)

Installation Guide (1) is supplied only when product is purchased separately.

#### Specifications

##### General

Power requirements:  
100 to 240 V AC  $\pm$  10%, 50/60 Hz  
Output power:  
12 V DC  $\pm$ 0.5V  
Power consumption:  
10 to 5 A  
Secondary power supply:  
Max. 60 A

#### Dimensions (W x H x D):

94 x 83 x 396 mm  
(3 3/4 x 3 3/8 x 15 5/8 inches)

#### Mass:

Approx. 3 kg (6 lb 9 oz)

### HK-PSU11 Power Supply Unit (Control Panel)

Redundant power supply unit for Control Panel Unit that can be used as second power supply unit for the MKS-2010, MKS-2015, and MKS-2017 Control Panels.

#### Applicable Models

MFS-2000 Multi-Format Switcher Processor  
MKS-2010 1 M/E Control Panel (MFS-2000)  
MKS-2015 1.5 M/E Control Panel (MFS-2000)  
MKS-2017 1.5 M/E Wide Control Panel (MFS-2000)  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel

#### Supplied Accessories

Installation Guide (1)

#### Specifications

##### General

Operating temperature:  
5 to 40 °C (41 to 104 °F)  
Storage temperature:  
- 20 to 60 °C (- 4 to 140 °F)  
Operating humidity:  
10% to 90% (nocondensation)

Editor/DME/Switcher Accessories

MKE-8020A MVS INTERFACE BOARD

The MKE-8020A is an optional board for the MVE8000A Multi Format DME Processor. The MVE8000A requires the MKE-8020A as an interface board to the MVS-8000A series production switcher system.

Applicable Models

MVE-8000A Multi-Format DME Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

Specifications

Video inputs/Video outputs  
MVS interface:  
MDR 68-pin x 2 (inputs/outputs: 2 CH x 2), LVDS

Supplied Accessories

Operation Manual (1)  
Dedicated Interface Cable (2)  
Installation Guide (1)

MKE-8021A INPUT/OUTPUT BOARD (SDI)

The MKE-8021A is an optional board for the MVE8000A Multi Format DME Processor. The MKE-8021A has input and output connectors for SDI signals and BNC connectors for monitoring.

Applicable Models

MVE-8000A Multi-Format DME Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

Specifications

Video inputs  
Video/Key: BNC connector x 8, SDI  
Video outputs  
Video/Key: BNC connector x 8, SDI  
Monitor outputs:  
BNC connector x 4, SDI

Supplied Accessories

Operation Manual (1)  
Installation Guide (1)

MKE-8040A EFFECTS BOARD (MVE-8000A)

The MKE-8040A EFFECTS BOARD provides excellent 2-channel effects to the MVE-8000A MULTI FORMAT DME PROCESSOR. The MKE-8040A provides the following stunning effects: Beveled Edge, Glow, Digital SKETCH., Metal, and Mask. Its multi-format capabilities make it suited to both content creation in high-end production and post-production. The MKE-8040A comprises a single board.

Applicable Models

MVE-8000A Multi-Format DME Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

## Editor/DME/Switcher Accessories

# MKE-9020M MVS Interface Board Set for the MVE-9000

Dedicated connection to the MVS-8000 Series/DVS-9000

Series switcher

### Features

- Provides dedicated Video and Key I/O, SDI External video inputs per channel, and 4 SDI monitor outputs
- Provides a 68-pin multi-connector cables to connect to the MVS-8000 Series switcher

### Applicable Models

MVE-9000 Multi-format DME Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### Supplied Accessories

Operation and Installation Guide (1)

### Specifications

- Video inputs/Video outputs -

MVS interface:

MDR 68-pin x 2 (inputs/outputs: 2 CH x 2), LVDS

# MKE-9021M Input/Output Board Set for the MVE-9000

Provides SDI interfaces for standalone operations

### Features

- Provides Video, Key and External Video inputs per channel, Video and Key outputs per channel, and 4 monitor outputs
- Provides SDI connectors to connect to the MVS-8000 Series switcher

### Applicable Models

MVE-9000 Multi-format DME Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### Supplied Accessories

Operation and Installation Guide (1)

### Specifications

#### Inputs

Video inputs

SDI

Video/Key: BNC-type connectors x 8

Ext Video IN: BNC-type connectors x 4

#### Outputs

Video outputs

SDI

Video/Key: BNC-type connectors x 8

Monitor Out: BNC-type connectors x 4

## Editor/DME/Switcher Accessories

# MKE-9040M Advanced Effects Board for the MVE-9000

### Features

- Provides one channel of DME effects; 2D/3D Transform including non-linear effects, sketch, beveled edge and more
- Up to four MKE-9040M boards can be installed into an MVE-9000 unit on a channel basis

### Applicable Models

MVE-9000 Multi-format DME Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### Supplied Accessories

Operation and Installation Guide (1)

## Editor/DME/Switcher Accessories

### MKS-2010 1 M/E Control Panel (MFS-2000)

The MKS-2010 is a compact 1 M/E Control Panel which is 19 inches in width and offers 12-crosspoint buttons. Its FlexiPad™ control panel is equipped with color LCD buttons that indicate assigned functions to give users extremely intuitive operation. An easy-to-use color touch-screen LCD panel provides users with effective and straightforward menu control.

#### Applicable Models

MFS-2000 Multi-Format Switcher Processor

#### Optional Accessories

HK-PSU11 Power Supply Unit (Control Panel)

#### Specifications

##### General

Power consumption:

1.0 to 0.5 A

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

-20 °C to +60 °C (-4 °F to +140 °F)

Operation humidity:

10% to 90% RH

Dimensions (W x H x D):

440 x 167.5 x 353.9 mm (17 3/8 x 6 5/8 x 14 inches)

Mass:

10.3 kg (22 lb 11 oz)

##### Input/output connectors

Reference inputs

BNC connector x 2, 75Ω with

loop-through

HDTV system: HD tri-level sync, Analog

black burst, or analog sync

SDTV system: Analog black burst or

analog sync

Ext display output:

Mini D-sub 15-pin x 1, Analog RGB

interface

##### Control signals

Control LAN:

RJ-45 x 1, 100BASE-TX

Data LAN:

RJ-45 x 1, 100BASE-TX

Peripheral LAN:

RJ-45 x 1, 100BASE-TX

Device:

USB type A x 1, compliance with USB

1.1

Remote:

BNC connector x 1, S-BUS

GPI:

D-sub 25-pin (female) x 1, TTL level

inputs x 8, Relay contact outputs x 4,

Open collector outputs x 4



## Editor/DME/Switcher Accessories

### MKS-2015 1.5 M/E Control Panel (MFS-2000)

The MKS-2015 is a compact 1.5 M/E Control Panel which is 19 inches in width and offers 12-crosspoint buttons. Its FlexiPad™ control panel is equipped with color LCD buttons that indicate assigned functions to give users extremely intuitive operation. An easy-to-use color touch-screen LCD panel provides users with effective and straightforward menu control.

#### Applicable Models

MFS-2000 Multi-Format Switcher Processor

#### Optional Accessories

HK-PSU11 Power Supply Unit (Control Panel)

#### Specifications

##### General

Power consumption:

1.0 to 0.5 A

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

-20 °C to +60 °C (-4 °F to +140 °F)

Operation humidity:

10% to 90% RH

Dimensions (W x H x D):

440 x 167.5 x 448.1 mm (17 3/8 x 6 5/8 x 17 3/4 inches)

Mass:

11.3 kg (24 lb 15 oz)

##### Input/output connectors

Reference inputs

BNC type x 2, 75Ω with loop-through

HDTV system: HD tri-level sync, Analog

black burst, or analog sync

SDTV system: Analog black burst or

analog sync

Ext display output:

Mini D-sub 15-pin x 1, Analog RGB

interface

##### Control signals

Control LAN:

RJ-45 x 1, 100BASE-TX

Data LAN:

RJ-45 x 1, 100BASE-TX

Peripheral LAN:

RJ-45 x 1, 100BASE-TX

Device:

USB type A x 1, compliance with USB

1.1

Remote:

BNC connector x 1, S-BUS

GPI:

D-sub 25-pin (female) x 1, TTL level

inputs x 8, Relay contact outputs x 4,

Open collector outputs x 4



## Editor/DME/Switcher Accessories

### MKS-2017 1.5 M/E Wide Control Panel (MFS-2000)

The MKS-2017 is a compact 1.5 M/E Wide Control Panel which is 576-mm width and offers 20-crosspoint buttons. Its FlexiPad™ control panel is equipped with color LCD buttons that indicate assigned functions to give users extremely intuitive operation. An easy-to-use color touch-screen LCD panel provides users with effective and straightforward menu control.

#### Applicable Models

MFS-2000 Multi-Format Switcher Processor

#### Optional Accessories

HK-PSU11 Power Supply Unit (Control Panel)

#### Specifications

##### General

Power consumption:

1.0 to 0.6 A

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

-20 °C to +60 °C (-4 °F to +140 °F)

Operation humidity:

10% to 90% RH

Dimensions (W x H x D):

576 x 167.5 x 448.1 mm (22 3/4 x 6 5/8 x 17 3/4 inches)

Mass:

12.6 kg (27 lb 12 oz)

##### Input/output connectors

Reference inputs

BNC type x 2, 75Ω with loop-through

HDTV system: HD tri-level sync, Analog

black burst, or analog sync

SDTV system: Analog black burst or

analog sync

Ext display output:

Mini D-sub 15-pin x 1, Analog RGB interface

##### Control signals

Control LAN:

RJ-45 x 1, 100BASE-TX

Data LAN:

RJ-45 x 1, 100BASE-TX

Peripheral LAN:

RJ-45 x 1, 100BASE-TX

Device:

USB type A x 1, compliance with USB 1.1

Remote:

BNC connector x 1, S-BUS

GPI:

D-sub 25-pin (female) x 1, TTL level inputs x 8, Relay contact outputs x 4, Open collector outputs x 4



## Editor/DME/Switcher Accessories

# MKS-2050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)

The MKS-2050 Editing Keyboard adds editing functions to the MVS-8000A series, the DVS-9000 series, and MFS-2000 production switcher systems by connecting the MKS-2050 to the MKS-8010A System Control Unit, the MKS-2010, the MKS-2015, or the MKS-2017 Control Panels. The MKS-8010A, the MKS-2010, the MKS-2015, and the MKS-2017 require the BZS-8050 Editing Control Software to be installed.

### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MFS-2000 Multi-Format Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### Supplied Accessories

User Guide (1)  
15-pin 10m cable (1)

### Optional Accessories

BZS-8050 Editing Control Software  
(MVS-8000A, DVS-9000, MFS-2000)

# MKS-2110M Input/Output Connector Board (MFS-2000)

The optional MKS-2110M Input/Output Connector Board provides 8 SDI input connectors and 4 SDI output connectors to the MFS-2000 Series Multi-Format Switchers.

### Applicable Models

MFS-2000 Multi-Format Switcher Processor

### Specifications

#### Input/output connectors

SDI video inputs:

Max.8, BNC connector x1 each  
SMPTE292M(HDTV), SMPTE259-C(SDTV)

SDI video outputs:

Max.4, BNC connector x2 each  
SMPTE292M(HDTV), SMPTE259-C(SDTV)

# MKS-2420M Color Corrector Board

Full-function 2-channel multi-format color correction.

Primary color correction for the red, green, and blue signals is provided. Secondary color correction is also available.

\*Optional MKS-2440 board is required

### Applicable Models

MFS-2000 Multi-Format Switcher Processor

## Editor/DME/Switcher Accessories

### MKS-2440 Frame Memory Board Set (MFS-2000)

The MKS-2440 Frame Memory Board Set provides powerful 6-channel frame memory with animation capability to the MFS-2000 Series Multi-Format Switchers. The MKS-2440 offers two channel-source busses and six channel outputs with re-position capability. The frame memory stores 435 frames of HD images which translates into approximately 15 seconds at 1080/59.94i, or 2184 frames of SD images which translates into approximately 73 seconds at 480i/59.94.

#### Applicable Models

MFS-2000 Multi-Format Switcher Processor

#### Specifications

##### Control signals

Image file LAN:

RJ-45 x 1, 100BASE-TX

Device:

IEEE1394 6-pin x 1

### MKS-2470 DME Board Set

The MKS-2470 DME Board Set provides state-of-the-art integrated 2-channel effects as preset DME patterns to the MFS-2000 Series Multi-Format Switchers. The MKS-2470 provides the following stunning effects: 2D/3D linear and nonlinear transforms, Digital SPARKLE, LIGHTING, SHADOW, TRAIL, Digital SKETCH, GLOW, and METAL.

#### Applicable Models

MFS-2000 Multi-Format Switcher Processor

## Editor/DME/Switcher Accessories

### MKS-2700 Device Control Unit

The MKS-2700 Device Control Unit is a compact Device Control Unit for the MVS-8000A series, the DVS-9000 series, and the MFS-2000 production switcher system with its size 1RU. Redundant power supply is supported by using the optional HK-PSU01 Power Supply Unit. The MKS-2700 is suitable for small-scale systems with affordable price.



#### Applicable Models

MFS-2000 Multi-Format Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Optional Accessories

HK-PSU01 Power Supply Unit

#### Specifications

##### General

Power consumption:

0.7 to 0.5 A

Operating temperature:

5 °C to 40 °C (41 °F to 104 °F)

Storage temperature:

-20 °C to +60 °C (-4 °F to +140 °F)

Operation humidity:

10% to 90% RH

Dimensions (W x H x D):

440 x 43.6 x 520 mm (17 3/8 x 1 3/4 x 20 1/2 inches)

Mass:

9.8 kg (21 lb 10 oz)

#### Control signals

Peripheral LAN:

RJ-45 x 1, 100BASE-TX

TALLY/GPI inputs:

D-sub 37-pin x 1, TTL level inputs x 34

TALLY/GPI outputs:

D-sub 37-pin x 2, TTL level inputs x 18 each

REMOTE:

D-sub 9-pin x 6, RS-422A, various protocols

### MKS-8010A System Control Unit

The MKS-8010A System Control Unit works as the central control over the CCP-8000Series Center Control Panel. The system control unit provides control functions for the center control panel, supplies power to various panel modules, and stores the whole setup data, effects data, snapshot data and still images.



#### Features

●The MKS-8010A is a compact system control unit with its size compact 1RU ●Redundant power supply is supported by using the optional HK-PSU02 Power Supply Unit

#### Optional Accessories

HK-PSU02 Power Supply Unit  
SWC-5002 Control Panel Cable  
SWC-5005 Control Panel Cable  
SWC-5010 Control Panel Cable  
MKS-8075 Extension Adaptor  
MKS-8076 Memory Card/USB Adaptor

#### Specifications

##### General

Power requirements:

100 to 240 V AC +/- 10%, 50/60 Hz

Power consumption:

Max. 250 W (incl. Center Control Panel, Aux Panel and Menu Panel)

Dimensions (W x H x D, without projection):

440 x 43.6 x 520 mm (17 3/8 x 1 3/4 x 20 1/2 inches)

Mass:

11.5 kg (25 lb 6 oz)

Operating temperature:

5 to 40 °C (41 to +104 °F)

Operating humidity:

10% to 90% (Non-condensing)

#### Inputs

Reference Input:

BNC connector x 2, Loop-through  
HD Tri-level Sync (HDTV only) or Analog  
Black Burst or Sync

#### System interface

Control LAN:

RJ-45, 100BASE-TX

Data LAN:

RJ-45, 100BASE-TX

Peripheral LAN:

RJ-45, 100BASE-TX

GPI:

D-sub 25-pin, TTL level inputs x 8 /  
relay contact outputs x 4 /  
open collector outputs x 4

Remote:

BNC connector x 1, S-BUS

LTC:

BNC connector x 1

Device:

USB Type A

## Editor/DME/Switcher Accessories

### MKS-8011 Menu Panel

Menu panel is used to select different types of effects, such as transitions, keys, wipes, DME (digital multi effect) functions, etc. and to set up the operational mode and the system setting of peripherals. A 10.4-inch, touch-sensitive color LCD screen is adopted for the menu panel to give intuitive and speedy operation.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):  
424 x 220 mm (5 RU) (16 3/4 x 8 3/4 inches)



Editor/DME/Switcher Accessories

### MKS-8013 32 Aux Bus Module

The auxiliary module is used to select sources for monitoring and recording, and also to select material to the frame memory and DME. By changing their operational mode, these buses can then select the destinations and sources of a routing switcher. Each auxiliary bus has two crosspoint button rows, the allocation of which can be set independently. For instance, the DME video can be on the upper row and the DME key on the lower row, alternatively both Shifted and Non-shifted sources can be displayed at the same time.

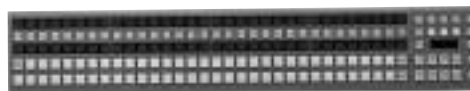
#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

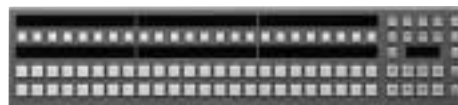
Dimensions (W x H):  
750 x 132 mm (3 RU) (29 5/8 x 5 1/4 inches)



## Editor/DME/Switcher Accessories

### MKS-8014 24 Aux Bus Module

The auxiliary bus module is used to select sources for monitoring and recording, and also to select material to the frame memory and DME. By changing their operational mode, these buses can then select the destinations and sources of a routing switcher. Each auxiliary bus has two crosspoint button rows, the allocation of which can be set independently. For instance, the DME video can be on the upper row and the DME key on the lower row, alternatively both Shifted and Non-shifted sources can be displayed at the same time.



#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

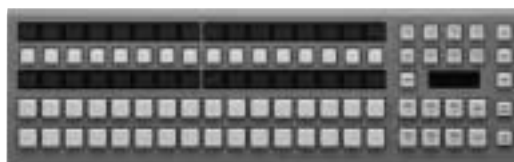
##### General

Dimensions (W x H):

598 x 132 mm (3 RU) (23 1/2 x 5 1/4 inches)

### MKS-8015 16 Aux Bus Module

The auxiliary bus module is used to select sources for monitoring and recording, and also to select material to the frame memory and DME. By changing their operational mode, these buses can then select the destinations and sources of a routing switcher. Each auxiliary bus has two crosspoint button rows, the allocation of which can be set independently. For instance, the DME video can be on the upper row and the DME key on the lower row, alternatively both Shifted and Non-shifted sources can be displayed at the same time.



#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

444 x 132 mm (3RU) (17 1/2 x 5 1/4 inches)

## Editor/DME/Switcher Accessories

### MKS-8017 32 Crosspoint Module

The Crosspoint module is used to select background and key sources for each M/E or PGM/PST bank. These modules provide two rows of key source selection buttons, plus a source name display row and two background source selection rows. On the key source selection rows, Keys 1/3 and Keys 2/4 can be interchanged. On the Background rows, sources can also be selected from the Utility 1/2 busses. Three-color, backlit LCD displays are used on the source name display row. These enable text and graphics to be displayed in any one of three colors for easy user identification of source type.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

750 x 132 mm (3 RU) (29 5/8 x 5 1/4 inches)



### MKS-8018 24 Crosspoint Module

The crosspoint module is used to select background and key sources for each M/E or PGM/PST bank. These modules provide two rows of key source selection buttons, plus a source name display row and two background source selection rows. On the key source selection rows, Keys 1/3 and Keys 2/4 can be interchanged. On the Background rows, sources can also be selected from the Utility 1/2 bus. Three-color, backlit LCD displays are used on the source name display row. These enable text and graphics to be displayed in any one of three colors for easy user identification of source type.

#### Applicable Models

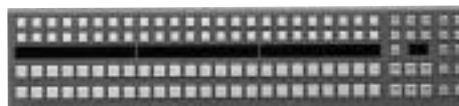
DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

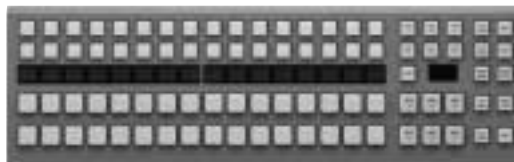
598 x 132 mm (3 RU) (23 1/2 x 5 1/4 inches)



## Editor/DME/Switcher Accessories

### MKS-8019 16 Crosspoint Module

The crosspoint module is used to select background and key sources for each M/E or PGM/PST bank. These modules provide two rows of key source selection buttons, plus a source name display row and two background source selection rows. On the key source selection rows, Keys 1/3 and Keys 2/4 can be interchanged. On the Background rows, sources can also be selected from the Utility 1/2 bus. Three-color, backlit LCD displays are used on the source name display row. These enable text and graphics to be displayed in any one of three colors for easy user identification of source type.



#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

444 x 132 mm (3 RU) (17 1/2 x 5 1/4 inches)

### MKS-8020 Standard Transition Module

The standard transition module is used to cut or transition images on each M/E or PGM/PST bank. It consists of a standard transition area equipped with fader lever and four additional dedicated key transition areas, any of which can be used independently for transition selection and execution. This standard transition area allows priority setting of all four keys with transition preview, while the dedicated key transition area provides buttons for key snapshot store and recall operations.



#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

293 x 132 mm (3 RU) (11 5/8 x 5 1/4 inches)

## Editor/DME/Switcher Accessories

### MKS-8021 Simple Transition Right Module

The simple transition right module is used to cut or transition images on each M/E or PGM/PST bank. It comprises a background transition area equipped with key fader including Key-1 and Key-2 and a simple FlexiPad™ block.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

293 x 132 mm (3 RU) (11 5/8 x 5 1/4 inches)



### MKS-8022 Simple Transition Left Module

The simple transition left module is used to cut or transition images on each M/E or PGM/PST bank. It comprises a background transition area equipped with key fader including Key-1 and Key-2 and a simple FlexiPad block.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

293 x 132 mm (3 RU) (11 5/8 x 5 1/4 inches)



## Editor/DME/Switcher Accessories

### MKS-8023 Compact Key Transition Module

The compact key transition module, in combination with a simple transition module, allows independent transition of Key-3 and Key-4.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

147 x 132 mm (3 RU) (5 7/8 x 5 1/4 inches)



### MKS-8024 Flexipad Module

The Flexipad Module has 12 Memory Recall buttons, each with a three-color backlit LCD. These LCDs provide a text/graphic display showing the effects stored for each operational mode. This module is used in combination with Wipe and DME Wipe, and operations such as M/E or PGM/PST. It can also be used for Effects, Shot Box and Macros, and even has an undo capability.

#### Applicable Models

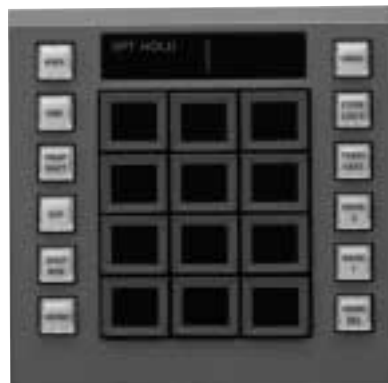
DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

147 x 132 mm (3 RU) (5 7/8 x 5 1/4 inches)



Editor/DME/Switcher Accessories

MKS-8025MS Memory Stick /USB Module

The MKS-8025MS Memory Stick/USB module is used to store and load data such as snapshots, effects, set-up data, images, etc. from Memory Stick. It provides a slot for a Memory Stick and has three USB connectors. These connectors provide interfaces for other types of storage media and for menu operating devices such as a mouse, keyboard, and pen/tablet.

\*The MKS-8025MS works exclusively with MKS-8010A System Control Unit

Specifications

General

Dimensions (W x H):  
220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)

MKS-8026 10 Keypad Module

The 10 keypad module is used to select, store, recall and execute snapshots or effects, and recall and execute Shot Box and Macros. It can also be used to input transition rates. It provides a 12-digit alphanumeric display to show reference region names plus register numbers, depending on its operational mode.

Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

Specifications

General

Dimensions (W x H):  
220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)



## Editor/DME/Switcher Accessories

### MKS-8027 Compact Transition Right Module

The compact 1/2 rack-width transition module fits in a small-scale control panel for edit suits require less space. The module is based on the design of the MKS-8020 Standard Transition Module with simple key transition operations.

#### Features

- Size reduced to 1/2 rack-width to fit in a compact switcher system
- Uses the same design as the MKS-8020 Standard Transition Module for common transition part
- Key transition part consists of transition button
- Using the MKS-8027 and MKS-8028 for adjacent M/Es, the fader levers do not interfere with each other

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)



### MKS-8028 Compact Transition Left Module

The compact 1/2 rack-width transition module fits in a small-scale control panel for edit suits require less space. The module is based on the design of the MKS-8020 Standard Transition Module with simple key transition operations.

#### Features

- Size reduced to 1/2 rack-width to fit in a compact switcher system
- Uses the same design as the MKS-8020 Standard Transition Module for common transition part
- Key transition part consists of transition button
- Using the MKS-8027 and MKS-8028 for adjacent M/Es, the fader levers do not interfere with each other

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)



## Editor/DME/Switcher Accessories

### MKS-8030 Key Frame Module

The key frame module is used to set and edit keyframes and to execute effects. It consists of an effects execution block and a keyframe setting and editing block. The effects execution block is equipped with a fader lever for manual execution of effects.

#### Applicable Models

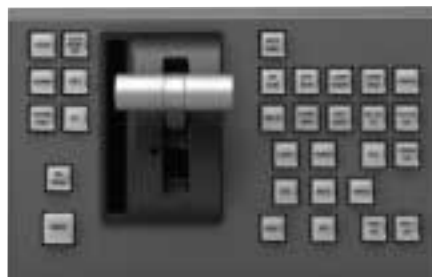
DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)



### MKS-8031JS Joy Stick Module

The joy stick module has identical functionality and are used to position wipes, the 3D Transform of the DME, and also to control tape and disk recorder functions. The parameters of control knobs 1-3 on the main menu panel can also be adjusted using the joy stick.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)



## Editor/DME/Switcher Accessories

### MKS-8031TB Track Ball Module

The track ball module has identical functionality and are used to position wipes, the 3D Transform of the DME, and also to control tape and disk recorder functions. The parameters of control knobs 1-3 on the main menu panel can also be adjusted using the track ball.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel

#### Specifications

##### General

Dimensions (W x H):  
220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)



### MKS-8032 DSK Fader Module

The DSK fader module is used to set up and execute transitions of the four keyers on the PGM/PST bank. A fader lever is included to execute manual transitions of one or more keyers.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):  
220 x 132 mm (3RU) (8 3/4 x 5 1/4 inches)



## Editor/DME/Switcher Accessories

### MKS-8033 Utility/Shotbox Module

The 24 memory recall buttons of this module have three-color, backlit LCDs to display the selection of effects and functions in text or graphics. Any Shot Box or Macro, plus a variety of utility functions, can be allocated to the module and any of these preset effects and functions can be instantly executed at the press of a single button. The delegation of all 24 memory recall buttons can be collectively changed at any one time by pressing the bank buttons.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)



Editor/DME/Switcher Accessories

### MKS-8034DK DSK/FTB Module

The DSK/FTB module is used to execute Fade-To-Black, and to conduct preview switching using the Edit Preview BUS. Control of externally connected DSKs (PFV-SP Series) is available from the DSK/FTB module.

#### Applicable Models

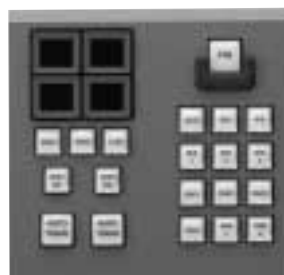
DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):

147 x 132 mm (3 RU) (5 7/8 x 5 1/4 inches)



## Editor/DME/Switcher Accessories

### MKS-8034FB FTB Module

The FTB module is used to execute Fade-To-Black, and to conduct preview switching using the Edit Preview Bus. Control of externally connected DSKs (PFV-SP Series) is available from the DSK/FTB module.

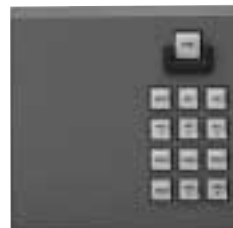
#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor

#### Specifications

##### General

Dimensions (W x H):  
147 x 132 mm (3 RU) (5 7/8 x 5 1/4 inches)



### MKS-8035 Key Control Module

The key control module is used to adjust and modify each keyer on any of the M/E or PGM/PST banks. It is also used to assign the DME keyers. The DME allocation block not only displays the current status of the allocation of each DME channel or which key is on-air, but also outputs desired channels to monitors. It can also change the allocated channel to another keyer in a mandatory way.

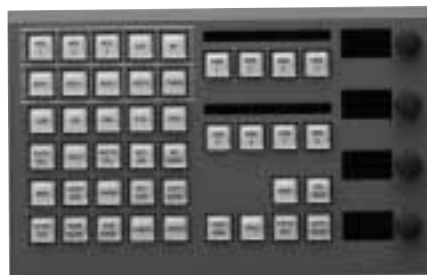
#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):  
220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)



### MKS-8040 Blank Panel

1/3 rack width size blank panel

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):  
147 x 132 mm (3 RU) (5 7/8 x 5 1/4 inches)



## Editor/DME/Switcher Accessories

### MKS-8041 Blank Panel

1/2 rack width size blank panel

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):  
220 mm x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)



Editor/DME/Switcher Accessories

### MKS-8050 Editing Keyboard (MVS-8000A, DVS-9000, MFS-2000)

The MKS-8050 Editing Keyboard adds editing functions to the MVS-8000A series, the DVS-9000 series, and MFS-2000 production switcher systems by connecting the MKS-8050 to the MKS-8010A System Control Unit, the MKS-2010, the MKS-2015, or the MKS-2017 Control Panels. The MKS-8010A, the MKS-2010, the MKS-2015, and the MKS-2017 require BZS-8050 Editing Control Software to be installed. The MKS-8050 is a QWERTY keyboard.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MFS-2000 Multi-Format Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Supplied Accessories

User Guide (1)  
15-pin 10m cable (1)

#### Optional Accessories

BZS-8050 Editing Control Software  
(MVS-8000A, DVS-9000, MFS-2000)

### MKS-8075 Extension Adaptor

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-8010A System Control Unit  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Specifications

##### General

Dimensions (W x H):  
220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)

Editor/DME/Switcher Accessories

MKS-8076 Memory Card/USB Adaptor

Applicable Models  
DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-8010A System Control Unit  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

Specifications

General

Dimensions (W x H):  
220 x 132 mm (3 RU) (8 3/4 x 5 1/4 inches)

MKS-8080 Aux Bus Remote Panel

Features

●Compact 1 RU design ●Single destination ●32 source select buttons and four re-entry buttons ●Provides the same button arrangements as those on the CCP-8000/CCP-9000 Series Center Control Panel for intuitive operation



Applicable Models  
DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

Supplied Accessories  
Operational Manual (1)  
T-Bridge and 75 Ω Terminator (1)

Specifications

General

Power requirements:  
100 to 240 V AC, 50/60 Hz  
Power consumption:  
10 W  
Operating temperature:  
5 to 40 °C (41to 104 °F)  
Storage temperature:  
- 20 to 60 °C (- 4 to 140 °F)  
Operating humidity:  
10 to 90%  
Dimensions (W x H x D):  
440 x 44 x 116.5 mm (17 3/8 x 1 3/4 x 4 5/8 inches)  
Mass:  
Approx. 1.4 kg (3 lb)

Remote

Remote 1 S-BUS  
Connector type:  
BNC connector (1)  
Data transfer method:  
BI-PHASE SPACE  
Data transfer rate:  
312 kb/s / 1250 kb/s  
Remote 2 RS-422A  
Connector type:  
D-sub 9-pin female (1)  
Data transfer method:  
Conforming to the EIA RS-422A  
Data transfer rate:  
38.4 kb/s  
Remote 3 RS-232C  
Connector type:  
D-sub 9-pin male (1)  
Data transfer method:  
8 bits, Non parity, No check  
Data transfer rate:  
38.4 kb/s  
Signal transfer distance:  
500 m (75 Ω coaxial cable, BELDEN 8281 or equivalent)

## Editor/DME/Switcher Accessories

### MKS-8082 Aux Bus Remote Panel

#### Features

- 3 RU height
- Assignable 16 delegation buttons for immediate access to multiple destinations
- 32 source select buttons and four re-entry buttons
- Provides the same button sizes as those on the CCP-8000/CCP-9000 Series Center Control Panel to offer same touch and feel
- Provides source name display



#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

#### Dimensions (W /H /D):

440 x 132 x 120 mm (17 3/8 x 5 1/4 x 4 3/4 inches)

#### Mass:

Approx. 2.6 kg (5 lb 12 oz)

#### Supplied Accessories

Operational Manual (1)  
T-Bridge and 75  $\Omega$  Terminator (1)

#### Specifications

##### General

Power requirements:  
100 to 240 V AC, 50/60 Hz  
Power consumption:  
25 W  
Operating temperature:  
5 to 40 °C (41 to 104 °F)  
Storage temperature:  
- 20 to 60 °C (4 to 140 °F)  
Operating humidity:  
10 to 90%

##### Remote

##### Remote 1 S-BUS

Connector type: BNC connector (1)  
Data transfer method: BI-PHASE SPACE  
Data transfer rate: 312 kb/s / 1250 kb/s

##### Remote 2 RS-422A

Connector type: D-sub 9-pin female (1)  
Data transfer method: Conforming to the EIA RS-422A  
Data transfer rate: 38.4 kb/s

##### Remote 3 RS-232C

Connector type: D-sub 9-pin male (1)  
Data transfer method: 8 bits, Non parity, No check  
Data transfer rate: 38.4 kb/s

##### Signal transfer distance:

500 m (75  $\Omega$  coaxial cable, BELDEN 8281 or equivalent)

### MKS-8110M 17-Input Board (HD/SD Multi-format)

The MKS-8110M is an optional HD SDI or SD SDI input board. With this option fitted, the MVS-8000 Series Switcher processor provides 17 HD SDI or SD SDI inputs.

#### Features

- The MVS-8000 switcher processor can expand up to 80 inputs with the MKS-8110M and MKS-8111M
- The MVS-8000SF switcher processor can expand up to 34 inputs

#### Applicable Models

MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### MKS-8110SD 17-Input Board (SD)

The MKS-8110SD is an optional SD SDI input board. With this option fitted, the MVS-8000/DVS-9000 Series switcher processor provides 17 SD SDI inputs

#### Features

- The MVS-8000 and DVS-9000 switcher processor can expand up to 68 inputs
- The MVS-8000SF and DVS-9000 SF switcher processor can expand up to 34 inputs

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor

## Editor/DME/Switcher Accessories

### MKS-8111M Additional 12-Input Board (HD/SD Multi-format)

MKS-8111M is an optional board that provides 12 HD SDI or SD SDI inputs. The HD SDI or SD SDI inputs of MVS-8000A Switcher processor can be expanded up to 80 in combination use of four MKS-8110M boards and a MKS-8111M board.

Applicable Models  
MVS-8000A Multi-Format Switcher Processor

### MKS-8111SD Additional 12-Input Board (SD)

MKS-8111SD is an optional board that provides 12 SD SDI inputs. The SD SDI inputs of DVS-9000 switcher processor can be expanded up to 80 in combination use of four MKS-8110SD boards and a MKS-8111SD board.

Applicable Models  
DVS-9000 Production Switcher Processor

### MKS-8160A 24-Output Board Set (HD/SD Multi-format)

The MKS-8160A is an optional HD SDI/SD SDI multi-format output board. With this option installed, the MVS-8000A Switcher processor offers 24 HD SDI or SD SDI outputs.

Applicable Models  
MVS-8000A Multi-Format Switcher Processor

### MKS-8161M 8 Monitor Output Board (HD/SD Multi-format)

The MKS-8161M is an optional HD SDI/SD SDI multi-format output board. With this option fitted, the MVS-8000A Switcher processor offers eight re-clocked outputs to which the primary input signals can be routed with minimum delay. Those outputs are useful to monitor every primary input signal or to re-entry the primary input signals through the external processors such as color correctors.

NOTE: Unlike the MKS-8060M, those monitor outputs cannot handle the processed signals.

Applicable Models  
MVS-8000A Multi-Format Switcher Processor

## Editor/DME/Switcher Accessories

### MKS-8162A 12-Output Connector Board

The MKS-8162A board adds 12 outputs for MVS-8000ASF system. Total 24 outputs including pre-installed 12 outputs can be used for MVS-8000ASF. This option is only for MVS-8000ASF.

#### Applicable Models

MVS-8000ASF Multi-Format Switcher Processor

### MKS-8170M DME Interface Board (HD/SD Multi-format)

DME interface board for multi-format applications for MVS-8000A Series.

#### Applicable Models

MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### MKS-8210A MIX/EFFECT BOARD

The MKS-8210A MIX/EFFECT BOARD is an optional board for the MVS-8000A and MVS-8000ASF production switcher systems. By installing the MKS-8210A, the MVS-8000A Switcher processor can be extended from two to four M/Es and the MVS-8000ASF Switcher processor can be extended from one to two M/Es.

#### Applicable Models

MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### MKS-8210K1 Upgrade Kit (MVS-8000)

This kit upgrades a set of MKS-8210SD/8210HD to multi format, allowing MKS-8210SD/8210HD to have same functionalities as MKS-8210M.

## Editor/DME/Switcher Accessories

### MKS-8210K2 Upgrade Kit (MVS-8000)

This kit upgrades two sets of MKS-8210SD/8210HD to multi format, allowing MKS-8210SD/8210HD to have same functionalities as MKS-8210M.

### MKS-8420M Color Correction Board for the MVS-8000 Series Switcher

#### Features

- 2-Channels of Primary RGB Color Correction and Secondary Color Corrections
- Primary RGB Color Correction for RGB color correction and Black/White balance, Gamma, Knee adjustments
- RGB Clip adjustment
- Luminance Process allows independent adjustment of the video signal based on three designated luminance levels
- Output Video Process function for video signal adjustment at the final CCR stage
- Spot Color Correction for video signal adjustment of a picked color
- YUV Clip adjustment
- Masks can be applied to Primary CCR, Luminance Process and Spot CCR stages
- Spot CCR mode or 6 Vector CCR mode can be selected in the setup menu

#### Applicable Models

MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### MKS-8440A FRAME MEMORY BOARD

The MKS-8440A FRAME MEMORY BOARD is an optional board for the MVS-8000A and the MVS-8000ASF production switcher systems. By installing the MKS-8440A, the MVS-8000A Series can store 58 frames of HD images\*. Images can either be stored separately or paired for video/key operation.

#### Applicable Models

MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

Editor/DME/Switcher Accessories

MKS-8440K1 Upgrade Kit (MVS-8000)

This kit upgrades a MKS-8440SD/8440HD to multi-format, allowing MKS-8440SD/8440HD to have same functionalities as MKS-8440M.

MKS-8700 Device Control Unit

The MKS-8700 is a device control unit for MVS-8000 Series in conjunction with MKS-8701 Tally/GPI Board and/or MKS-8702 Serial Interface Board. Up to five boards can be installed. One MKS-8700 can provide Tally/GPI port expansion in 3-port increments up to 15 ports (18 channels per one port) in combination with the MKS-8701. It can also provide RS-422A port expansion in 6-port increments up to 30 ports in combination with the MKS-8702.



Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

Supplied Accessories

Operation Manual (1)  
Installation Manual (1)  
75 Ω terminator (1)

Optional Boards

MKS-8701 Tally/GPI Output Board  
MKS-8702 Serial Interface Board

Optional Peripherals

HK-PSU03 Backup Power Supply Unit

Specifications

General

Power:  
Power Requirement  
100-240 V AC +/- 10% 50/60 Hz

Power Consumption

max. 250 W

Dimensions (W x H x D, without projection):

482 x 132 x 520 mm  
(19 x 5 1/4 x 20 1/2 inches)

Mass:

18 kg (39 lb 10 oz) (Fully Loaded)

Operation Temperature:

+5 °C to +40 °C (+41°F to +104°F)

Relative Humidity:

Up to 90% (Non-Condensing)

Reference

Reference Input:

BNC connector x 2, Loop-through  
HD Tri-level Sync (HDTV only) or  
Analog Black Burst or Sync

System Interface

Peripheral LAN :

RJ-45, 100BASE-TX

Serial Tally 1:

D-sub 9-pin, RS-422A

Serial Tally 2:

D-sub 9-pin, RS-422A

TALLY/GPI \* :

D-sub 37-pin, relay contact outputs 18-ch  
up to 15 ports in steps of 3 ports in a  
frame

REMOTE :

D-sub 9-pin, RS-422A, various protocols,  
up to 30 ports in steps of 6 ports in a  
frame

TALLY/GPI and REMOTE ports are alternatively  
installed. Mixed configuration of TALLY/GPI and  
REMOTE ports are possible.

## Editor/DME/Switcher Accessories

### MKS-8701 Tally/GPI Output Board

The MKS-8701 is a tally/GPI output board for MVS-8000 Series in conjunction with MKS-8700 Device Control Unit and/or MKS-8702 Serial Interface Board. Up to five boards can be installed. One MKS-8700 can provide Tally/GPI port expansion in 3-port increments up to 15 ports (18 channels per one port) in combination with the MKS-8701. It can also provide RS-422A port expansion in 6-port increments up to 30 ports in combination with the MKS-8702.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-8700 Device Control Unit  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### MKS-8702 Serial Interface Board

The MKS-8702 is a serial interface board for MVS-8000 Series in conjunction with MKS-8700 Device Control Unit and/or MKS-8701 Tally/GPI Interface Board. Up to five boards can be installed. One MKS-8700 can provide RS-422A port expansion in 6-port increments up to 30 ports in combination with the MKS-8702. It can also provide Tally/GPI port expansion in 3-port increments up to 15 ports (18 channels per one port) in combination with the MKS-8701.

#### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-8700 Device Control Unit  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

Editor/DME/Switcher Accessories

MKS-9011A 1 M/E Control Panel

The MKS-9011A is a 1 ME type control panel. This compact control panel is well suited for use in small OB VANS and edit suites. This control panel can also be used as sub remote panels in the MVS-8000A/DVS-9000 Series switcher systems.

Features

- 19-inch rack width with 1 M/E, 12 crosspoint buttons, source name display and 1 Key bus row
- Built-in SCU (System Control Unit)
- Can be used with the MVS-8000A /DVS-9000 Series switchers
- Can be used as a sub M/E remote panel for the MVS-8000A/DVS-9000 Series switchers



Applicable Models

- DVS-9000 Production Switcher Processor
- DVS-9000SF Production Switcher Processor
- MVS-8000A Multi-Format Switcher Processor
- MVS-8000ASF Multi-Format Switcher Processor

Supplied Accessories

- Software License Agreement (1)
- Operation manual (1)
- Installation manual (1)
- Console mount attachment (1)
- T bridge (1)
- Button top puller (1)
- 50-pin cables (1)
- Switch cover 12 (20)
- Switch cover 15 (20)
- Self-lighting switch chip (5)
- User's Guide (2)

Optional Accessories

- SWC-5002 Control Panel Cable
- HK-PSU11 Power Supply Unit (Control Panel)
- SWC-5005 Control Panel Cable
- SWC-5010 Control Panel Cable

Optional Panels

- MKS-8011 Menu Panel
- MKS-8031TB Track Ball Module
- MKS-8032 DSK Fader Module
- MKS-8033 Utility/Shotbox Module
- MKS-8035 Key Control Module
- MKS-8041 Blank Panel

Optional Peripherals

- MKS-8075 Extension Adaptor

Specifications

General

- Power requirement:
  - 100 to 240 V AC,  $\pm 10\%$  50/60 Hz
- Power consumption:
  - 1.0 A to 0.6 A
- Operating temperature:
  - 5 °C to 40 °C (41 °F to 104 °F)
- Storage temperature:
  - 20 °C to +60 °C (-4 °F to +140 °F)
- Operating humidity:
  - 10% to 90 % (Non-condensing)
- Dimensions (W x H x D)
  - Main Panel:
    - 440x175x385.3mm without mount bracket (17 3/8 x 7 x 15 1/4 inches)
  - Menu Panel:
    - 424 x 220 x 46 mm (16 3/4 x 8 3/4 x 1 13/16 inches)

Mass

- Main Panel:
  - 10 kg (22 lb 1 oz)
- Menu Panel:
  - 2.2 kg (4 lb 13 oz)

Control

- Control LAN:
  - RJ-45, 100Base-TX
- Data LAN:
  - RJ-45, 100Base-TX
- Peripheral LAN:
  - RJ-45, 100Base-TX
- GPI:
  - D-SUB 25-pin, TTL inputs x 8, relay contact outputs x 4, open collector outputs x 4
- Remote:
  - BNC connector, S-BUS
- Device:
  - USB type A
- Main Panel:
  - D-sub 50-pin
- Menu Panel:
  - D-sub 50-pin
- Ext Panel:
  - D-sub 50-pin

## Editor/DME/Switcher Accessories

# MKS-9012A 2 M/E Control Panel

The MKS-9012A is a 2 ME type control panel. This compact control panel is well suited for use in small OB VANS and edit suites. This control panel can also be used as sub remote panels in the MVS-8000A/DVS-9000 Series switcher systems.

### Features

- 19-inch rack width with 2 M/E, 12 crosspoint buttons, source name display and 1 Key bus row
- Built-in SCU (System Control Unit)
- Can be used with the MVS-8000A /DVS-9000 Series switchers
- Can be used as a sub M/E remote panel for the MVS-8000A/DVS-9000 Series switchers



### Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

### Mass

Main Panel  
11.5 kg (25 lb 6 oz)  
Menu Panel:  
2.2 kg (4 lb 13 oz)

### Control

Control LAN:  
RJ-45, 100Base-TX  
Data LAN:  
RJ-45, 100Base-TX  
Peripheral LAN:  
RJ-45, 100Base-TX  
GPI:  
D-SUB 25-pin, TTL inputs x 8, relay contact outputs x 4, open collector outputs x 4  
Remote:  
BNC type, S-BUS  
Device:  
USB type A  
Main Panel:  
D-sub 50-pin  
Menu Panel:  
D-sub 50-pin  
Ext Panel:  
D-sub 50-pin

### Supplied Accessories

Software License Agreement (1)  
Operation manual (1)  
Installation manual (1)  
Console mount attachment (1)  
T bridge (1)  
Button top puller (1)  
50-pin cables (1)  
Switch cover 12 (20)  
Switch cover 15 (20)  
Self-lighting switch chip (5)  
User's Guide (2)

### Optional Accessories

SWC-5002 Control Panel Cable  
HK-PSU11 Power Supply Unit (Control Panel)  
SWC-5005 Control Panel Cable  
SWC-5010 Control Panel Cable

### Optional Panels

MKS-8011 Menu Panel  
MKS-8031TB Track Ball Module  
MKS-8032 DSK Fader Module  
MKS-8033 Utility/Shotbox Module  
MKS-8035 Key Control Module  
MKS-8041 Blank Panel

### Optional Peripherals

MKS-8075 Extension Adaptor

### Specifications

#### General

Power requirement:  
100 to 240 V AC,  $\pm 10\%$  50/60 Hz  
Power consumption:  
1.0 to 0.6 A  
Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)  
Storage temperature:  
-20 °C to +60 °C (-4 °F to +140 °F)  
Operating humidity:  
10% to 90 % (Non-condensing)  
Dimensions (W x H x D)  
Main Panel:  
440 x 186.6 x 442 mm without mount  
bracket (17 3/8 x 7 3/8 x 17 1/2 inches)  
Menu Panel:  
424 x 220 x 46 mm (16 3/4 x 8 3/4 x 1 13/16 inches)

Editor/DME/Switcher Accessories

SWC-5002 Control Panel Cable

Features

●50-pin ●2 m ●MKS-8010 <—> CCP-8000 Series,  
MKS-8011, external panel modules ●MKS-9011/9012 <—  
> MKS-8011, external panel modules

Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-8010A System Control Unit  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel

SWC-5005 Control Panel Cable

Features

●50-pin ●5 m ●MKS-8010 <—> CCP-8000 Series,  
MKS-8011, external panel modules ●MKS-9011/9012 <—  
> MKS-8011, external panel modules

Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-8010A System Control Unit  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

SWC-5010 Control Panel Cable

Features

●50-pin ●10 m ●MKS-8010 <—> CCP-8000 Series,  
MKS-8011, external panel modules ●MKS-9011/9012 <—  
> MKS-8011, external panel modules

Applicable Models

DVS-9000 Production Switcher Processor  
DVS-9000SF Production Switcher Processor  
MKS-8010A System Control Unit  
MKS-9011A 1 M/E Control Panel  
MKS-9012A 2 M/E Control Panel  
MVS-8000A Multi-Format Switcher Processor  
MVS-8000ASF Multi-Format Switcher Processor

Editor/DME/Switcher Accessories

Editor/DME/Switcher Accessories

# News Editing System

DMW-S06NL ..... 508  
DNE-2000 ..... 509

News Editing System

## News Editing System

# DMW-S06NL XPRI Mobile Nonlinear Editing Software

### Features

- Nonlinear editing software specifically designed for field news editing
- Runs on a notebook PC, making it ideal for use in the field
- Compatible with XDCAM Professional Disc Systems and Sonaps Network Production System
- MPEG IMX/DVCAM editing
- Proxy editing
- Extremely high-speed transfer of Proxy AV Data
- Extremely quick logging by use of the Proxy AV Data
- Metadata support
- Straightforward and quick operation provided by intuitive GUIs
- Voice-over recording capability
- Can generate an EDL (Edit Decision List) and write it to the Professional Disc media
- A timeline created on the XPRI Mobile can be instantly reproduced on the XPRI MetaStation
- Direct browsing of materials stored on the Sonaps server(\*1)
- Quick and easy playout of an edited event by simple drag-and-drop operation through its GUI(\*1)
- Supports Ethernet and i.LINK interfaces
- A variety of video effects including basic dissolve, wipes, and 2D effects
- High-quality titler
- Compatible with DSR-DU1(\*1)
- Connection with e-VTR
- 525/625 switchable operation
- Mosaic capability
- Optional jog/shuttle control panel (\*2) for VTR-like control and easy-to-use audio fader panel (\*3)
- File import (XDCAM Clip List, MXF, Audio wav, image files including bmp, pcx, tif, jpg, gif)
- File export (XDCAM Clip List, MXF, TGA Sequence)
- Audio waveform display
- Audio rubber band
- Audio fader learn

(\*1) This feature will be available in Dec. '04 (\*2) DMW-C02 (\*3) DMW-C03

### Optional Accessories

DMW-C2 XPRI Jog and Shuttle Control Unit

DMW-C3 XPRI Audio Control Unit

### Specifications

#### System requirements

OS:

Windows XP Professional

CPU:

2.8 GHz or faster

Memory:

1 GB or more

HDD:

40 GB or more



## News Editing System

# DNE-2000 Digital News Editing System

### Features

- Non-linear editing system designed specifically for news production
- Consists of a Non-linear News Editor and the MAV-555 Disk Recorder
- Adopts MPEG-2 4:2:2 Profile at Main Level with a bit-rate of 50Mb/s
- Can be used either stand alone or integrated into the Sony NewsBase server system
- Intuitive graphical user interface designed specifically for News editing
- The dedicated Edit Control panel with a jog/shuttle dial and hard keys, and the Editing fader panel for audio level adjustments interact with the graphical user interface to provide a linear like environment
- Server based or local storage based editing - the DNE-2000 can directly access material stored on the server for simple edits or download the material to its local storage for more sophisticated editing
- High quality 4:2:2 switcher/DME provides all effects in real-time
- A linear-like editing function allows VTR or server material to be placed directly on the timeline
- RPR monitoring allows operators to preview the results of inserting a tape-based clip into the timeline prior to digitization
- Advanced audio timeline jog provides sound clarity and responsiveness reminiscent of tape devices
- Flexible voice over capability
- Identity/voice disguise
- 525/625 and 4:3/16:9 switchable
- SDTI-CP support for connection to other MPEG-2 devices and two times speed transfers

\*SDTI-CP is defined as SMPTE 326M

### Supplied Accessories

DNE-1000 (1)  
 BKV-100 (1)  
 BKNE-1010 (1)  
 BKNE-1011 (1)  
 BKNE-1020 (1)  
 BKNE-1030 (1)  
 BKNE-1040 (1)  
 MAV-555 (1)  
 BKMA-530 (1)  
 Operation manual (1)

### Optional Accessories

BKMA-540 SDTI Board

### Specifications

#### DNE Processor

##### General

Power requirements

AC 100V to 240V, 50/60Hz

Power consumption

Approx. 350W

Operating voltage

AC 90V to 264 V

Operating temperature

5°C to 40°C (41°F to 104°F)

Weight

Approx. 40kg (including optional boards)

Dimensions

Approx. 424(W)× 221(H)×450(D) mm, 16 3/4×8 3/4×17 3/4 inches

#### Input/Output Connectors

Primary input

SDI (BNC):×8

Reference input

B.I or Sync (BNC):×1 with loop-through

Audio AUX input

AES/EBU (XLR-3):×4

Time code input

Analog TC: ×1

Program output

SDI (BNC):×3

Preview output

SDI (BNC) ×2

Capture output

SDI (BNC) ×1

Audio program output

AES/EBU (XLR-3):×2

Audio monitor output

Analog (XLR-3): ×2

#### Remote connectors

Control panel

RS-422A (D-sub 15-pin): ×1

Device control

RS-422A (D-sub 9-pin): ×10

Ethernet port

10 Base 5 (D-sub 15-pin): 1

GPI IN

TTL: 4 ports

GPI OUT

TTL: 8 ports (TTL and Reply: 4ports)

Terminal

RS-232C (D-sub 9-pin): ×1

— Video Effect —

Effect

1-ME+1 DSK: CUT, MIX, WIPE/DME, External

Key

Effect pattern

WIPE: 108 patterns, 2D DME: 196 patterns, 3D

DME: 130 patterns (with BKNE-1041)

External key

Key type: Luminance/Chroma, Key adjust: Clip,

Gain

Snap shot memory system

100 effect status storage respectively for Effect

Layer and DSK Layer in each program

Internal video

Matte Generators for Color BKGD, Boarder, DSK

Fill etc. and Pattern Generators for brick, block

etc.

### Audio Effect

Filter

Low-cut filter: 20Hz to 330Hz, 12dB/oct, Notch filter: 50/60/100/120/150 and 180Hz

Built-in OSC

Frequency: 400/1 k/8 k/12 kHz variable, Output level: -10dB to -24dB (1dB step)

3-band equalizer

Frequency: LOW:20Hz to 330Hz, MID: 200Hz to 3.3kHz variable, HIGH: 1kHz to 16kHz

Gain: ±15dB (1dB step)

Q adjustment: 0.7 fixed

### Audio mixing

input

Up to 16 channels: 8 from embedded SDI input, 8 from AES/EBU AUX input

Output

Mix to 4 program outputs

### PC

IBM®Compatible with Windows NT™ workstation 4.0 installed

### MAV-555

Power requirements

AC 100V to 240V, 50/60Hz

Power consumption

Max 600W (including BKMA-530)

Humidity

20% to 90% (relative humidity)

Operating temperature

5°C to 40°C (41°F to 104°F)

Storage temperature

-20°C to 60°C (-4°F to 140°F)

Weight

50kg (110 lb)

Dimensions

424(W)× 226(H)×631(D) mm (16 3/4×10 1/2×24 7/8 inches)

News Editing System



News Editing System

Network Player

NSP-1 ..... 512  
NSP-100 ..... 513



# Network Player

## NSP-1 Sony Network Player

The NSP-1 is a Network Player designed to provide high quality graphics, video, and text for digital signage applications. It is ideal for use in shopping malls, airports, hotels, and any area where there is foot traffic.

### Features

- Versatile Content Presentation ●High-Quality Graphics and Text ●Excellent Video Quality ●Portrait Mode
- Selectable Output Resolution and Aspect Ratio
- Dedicated Audio Track ●Browser-Based Remote Setting & Schedule Confirmation ●Dynamic Content Transition
- Flexible Setting Layout with Wireless LAN ●Versatile Interfaces for System Customization



### Supplied Accessories

- AC adapter & AC cable (1)
- Operation manual (downloadable from the NSP-1 HDD) (1)
- Stand for desktop mounting in vertical position (1)
- BZNP-D1LE (Light Edition SW, downloadable from NSP-1 HDD) (1)

### Optional Accessories

- BZNP-D1 Content Management Software
- BZNP-DP10 Content Management Software
- BZNP-DP50 Content Management Software

### Specifications

#### General

- Dimensions (w x h x d): 210 x 44 x 167 mm (8 3/8 x 1 3/4 x 6 5/8 inches)
- Mass: Approx. 1.5 kg (3 lb 1 oz)
- Power: Power consumption; Approx. 45 W  
Power supply; DC 13.5 V provided from an AC adapter
- Operating temperature: +5 to +40 °C (+42 to +104°F)
- Storage temperature: -20 to +55°C (-4 to +131°F)
- Hard Disk Drive: 40 GB

#### Output (Media Formats)

- MPEG-2:  
[Video]MPEG-2 MP@ML, 4.0 Mb/s - 9.0 Mb/s  
[Audio]MPEG-1 Audio Layer II 2 channels (fixed), 256 kb/s, 48 kHz
- Graphics:  
Bitmap (.bmp), JPEG (.jpg), FLASH (.swf), HTML (.htm or .html)

- Text:  
Bitmap (.bmp), Text (.txt)

- Audio:  
Linear Audio (.wav), MP3 (.mp3)

- AV In:  
NTSC, PAL  
Stereo Audio

#### Output (Screen Image)

- Analog RGB:  
VGA(640 x 480 pixels), WVGA(848 x 480 pixels), SVGA(800 x 600 pixels), XGA(1024 x 768 pixels)

- Composite Video:\*  
NTSC(720 x 480 pixels), PAL(720 x 576 pixels)
- Screen Rotation:  
Landscape, Portrait(+90°, -90°)

#### Interface

- Video OUT:  
Analog RGB, HD D-sub 15-pin (male) x1  
Composite (RCA phono type) x1
- Audio OUT:  
Stereo RCA phono type x2, analog unbalanced
- Video IN:  
Composite (RCA phono type) x1
- Audio IN:  
Stereo RCA phono type x2, analog unbalanced
- Network:  
10/100Base-T Ethernet, RJ-45 modular jack x1
- PCMCIA:  
Type II x1
- USB:  
USB 1.0 x2
- Serial:  
RS-232C, D-sub 9-pin (male) x1
- GPI:  
D-Sub 25-pin (male) x1

#### Operating System and Network

- Operating system:  
Linux
- Supporting protocols:  
TCP/IP, HTTP

**Simultaneous output of "Analog RGB" and "Composite Video" is not available**

Network Player

NSP-100 Sony Network Player

The NSP-100 is a Network Player designed to provide high quality video, graphics, and text for digital signage applications. It is ideal for use in shopping malls, airports, hotels, and any area where there is foot traffic.

Features

- MPEG-2 Video up to 9 Mb/s, graphics, and scrollable text (text can be still, flashing, scolloed-in, or scrolling)
- 100Base-T network compatible, can deliver content over ordinary TCP/IP networks
- Encoding is simple with the BZNP-100 Network Player Management Software
- Material can be uploaded via FTP
- 2.5-inch 40GB HDD
- Video interfaces include component, RGB, S-Video, and composite
- RS-232C/GPI for control
- Two phono connectors for audio
- GUI based distribution management with the BZNP-100
- Less than 1.0kg (2.2lbs.), and measures 180 x 44 x 130 mm (7-1/8 x 1-3/4 x 5-1/8 inches)
- User friendly wireless IR (infrared) remote controller, RM-NSP1.

Supplied Accessories

- IR remote controller (RM-NSP1) (1)
- AC adapter & AC cable (1)
- Operation manual (hard copy and CD-ROM) (1)
- BZNP-100 trial version (CD-ROM) (1)

Optional Software

- BZNP-A1 Content Authoring Software
- BZNP-100 Network Player Management Software

Specifications

General

- Dimensions (w x h x d): 180 x 44 x 130 mm (7 1/8 x 1 3/4 x 5 1/8 inches)
- Mass: Approx. 1.0 kg (2 lb 3 oz)

Power:

- Power consumption: Approx. 18 W
- Power supply: DC 12 V provided from an AC adapter
- Hard Disk Drive: 40 GB

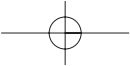


Network Player

Network Player

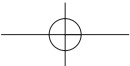
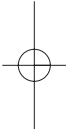


Network Player



Network Player Accessories/Peripherals

BZNP-100 ..... 516  
BZNP-A1 ..... 516  
BZNP-D1 ..... 516  
BZNP-DP10 ..... 516  
BZNP-DP50 ..... 517



## Network Player Accessories/Peripherals

### BZNP-100 Network Player Management Software

#### Features

- Network Player Management Software for the NSP-100
- For managing and encoding material, and for distributing material and playlists to NSP-100 units over TCP/IP networks
- Capable of distributing data to 30 clients
- User friendly drag-and-drop based GUI

#### Applicable Models

NSP-100 Sony Network Player

### BZNP-A1 Content Authoring Software

#### Features

- Content authoring software for the NSP-100 Network Player
- Easy-to-use single-layer GUI
- Ability to ingest/digitize DV or DVCAM material via i.LINK AV/C interface
- Easy timeline-based authoring with multiple tracks including video, two audio channels, graphics, and text
- Authored contents can be easily exported for distribution with the BZNP-100 Network Player Management Software

#### Applicable Models

NSP-100 Sony Network Player

### BZNP-D1 Content Management Software

#### Features

- User-friendly authoring and scheduling
- Management and control of up to 10 NSP-1 Network Players

#### Applicable Models

NSP-1 Sony Network Player

### BZNP-DP10 Content Management Software

#### Features

- User-friendly authoring and scheduling
- Expansion License for the management and control of 10 additional NSP-1 Network Players
- Requires the BZNP-D1 Software

#### Applicable Models

NSP-1 Sony Network Player

Network Player Accessories/Peripherals

BZNP-DP50 Content Management Software

Features

●User-friendly authoring and scheduling ●Expansion  
License for the management and control of 50 additional  
NSP-1 Network Players ●Requires the BZNP-D1  
Software

Applicable Models

NSP-1 Sony Network Player

Network Player Accessories/Peripherals



Network Player Accessories/Peripherals

Disk Recorder

DSR-DR1000..... 520  
DSR-DR1000P ..... 521  
MAV-555A (10 hour recording model) .. 522  
MAV-555A (20 hour recording model) .. 524  
MAV-555SS ..... 526  
MAV-777 (4 hour recording model) . . . 527  
MAV-777 (8 hour recording model) . . . 529

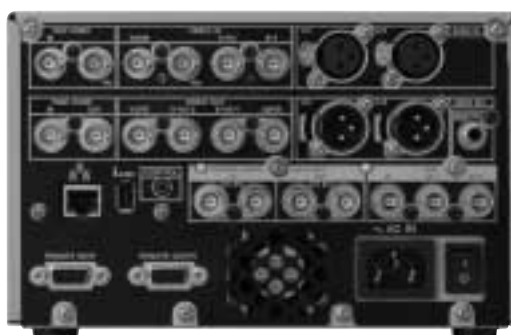
Disk Recorder

## Disk Recorder

# DSR-DR1000 Video Disk Recorder

### Features

- Hard disk recorder with 3.5-inch large-capacity hard drive
- Up to six hours of 25 Mb/s DVCAM/DV video and audio recording
- Compact and lightweight (210 x 130 x 422 mm/ 8 3/8 x 5 1/8 x 16 5/8 inches, 7.5 kg/ 16 lb 10 oz)
- Simultaneous recording and playback capability
- Variable speed playback within a wide range of -2 to +2 times normal speed
- Smooth jog sound capability for easy designation of editing points.
- Clip segment playback for continuous playback of designated video segments
- Continuous loop recording allows recording to continue until stopped by operator
- Interval recording to produce recordings over extended periods
- Pre-alarm recording automatically triggers recording to start when an external alarm signal is detected
- VTR-like control panel with Jog/Shuttle dial
- Random access to files
- Synchronous playback via RS-422A
- Versatile interfaces
- i.LINK interface (6-pin) with AV/C and SBP2 protocols
- High-speed file transfer via i.LINK interface using SBP2 protocol
- File transfer of DV video and audio using FTP



Disk Recorder

### Supplied Accessories

AC power cord (1)  
RM-LG2 (remote control unit) (1)  
Operation manual (1)  
Warranty card (1)

### Optional Accessories

RCC-G Cables 9-pin/9-pin Cable  
CCF-L Cables DV Cables (6-pin to 6-pin)  
CCFD-L Cables DV Cables (6-pin to 4-pin)

### Specifications

#### General

Power requirements:  
AC 100 V to 240 V, 50/60 Hz  
Power consumption:  
60 W  
Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)  
Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)  
Operating humidity:  
Less than 80%  
Storage humidity:  
Less than 90%  
Mass:  
7.5 kg (16 lb 10 oz)  
Dimensions (W x H x D):  
210 x 130 x 422 mm (8 3/8 x 5 1/8 x 16 5/8 inches, without projection)

#### Video Performance

Bandwidth (via analog component I/O)  
Luminance: 30 Hz to 5.0 MHz +1.0  
Chrominance: 30 Hz to 1.5 MHz +1.0/-5.0 dB  
S/N ratio (via analog component I/O):  
More than 54 dB  
K-factor (K2T, KPB):  
Less than 2%  
Y/C delay:  
Less than 30 ns

### Audio Performance

Frequency response  
2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz  $\pm 1.0$  dB  
4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz  $\pm 1.0$  dB  
Dynamic range:  
More than 87 dB  
Distortion (THD + N):  
Less than 0.07% (48 kHz)

### Input Signals

VIDEO (ANALOG)  
REF. Video: BNC (2)  
0.286 Vp-p, 75  $\Omega$  sync negative  
Composite Video: BNC (2), loop-through connection (\*1)  
1.0 Vp-p, 75  $\Omega$ , sync negative  
Component: BNC (3) (\*1)  
Y: 1.0 Vp-p, 75  $\Omega$ , sync negative  
R-Y, B-Y: 0.7 Vp-p, 75  $\Omega$  (75% color bar)  
S-Video: BNC (2) (\*1)  
Y: 1.0 Vp-p, 75  $\Omega$ , sync negative  
C: 0.286 Vp-p, 75  $\Omega$  (at burst level)  
VIDEO (DIGITAL)  
SDI: BNC (1)  
Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M  
i.LINK (DV): 6-pin (1)  
IEEE 1394-based  
AUDIO (ANALOG)  
Audio: XLR 3-pin female (2)  
-6/0/+4 dBu (selectable by menu), high impedance  
AUDIO (DIGITAL)  
AES/EBU: BNC (2)  
75  $\Omega$ , unbalanced  
Time Code  
BNC (1), 0.5 Vp-p to 18.0 Vp-p, 3 k $\Omega$  unbalanced

### Output Signals

VIDEO (ANALOG)  
Video 1/2 (SUPER): BNC (2) (\*2)  
Composite, 1.0 Vp-p, 75  $\Omega$ , sync negative  
Component: BNC (3) (\*2)  
Y: 1.0 Vp-p, 75  $\Omega$ , sync negative  
R-Y, B-Y: 0.7 Vp-p, 75  $\Omega$  (75% color bar)  
S-Video: BNC (2) (\*2)  
Y: 1.0 Vp-p, 75  $\Omega$ , sync negative  
C: 0.286 Vp-p, 75  $\Omega$  (at burst level)  
VIDEO (DIGITAL)  
SDI: BNC (2)  
Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M  
i.LINK (DV): 6-pin (1)  
IEEE 1394-based  
AUDIO (ANALOG)  
Audio: XLR 3-pin male (2)  
-6/0/+4 dBu (selectable by menu)  
Monitor: RCA (1)  
-11 dBu, 47 k $\Omega$ , unbalanced (-20 dBFS), volume center  
Headphone: JM-60 headphone jack (1)  
- $\infty$  to -13 dBu, 8  $\Omega$ , unbalanced (-20 dBFS)  
AUDIO (DIGITAL):  
AES/EBU: BNC (2), 75  $\Omega$ , unbalanced  
TIME CODE:  
BNC (1), 2.2 Vp-p, 600  $\Omega$ , unbalanced  
REMOTE  
RS-422A: D-sub 9-pin, female (2)  
Control: Mini jack (1)  
Network  
Ethernet (1): 10 Base-T/100 Base-TX Ethernet, RJ-45 modular jack

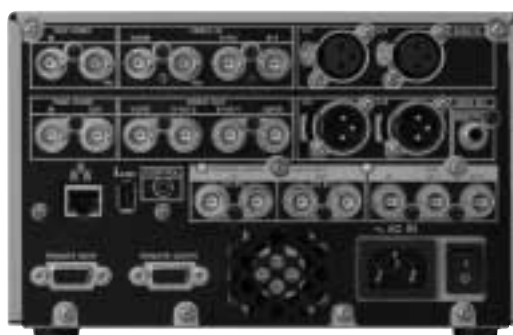
(\*1) Composite, Component and S-Video inputs share the same BNC connectors. (\*2) Composite, Component and S-Video outputs share the same BNC connectors.

## Disk Recorder

# DSR-DR1000P Video Disk Recorder

### Features

- Hard disk recorder with 3.5-inch large-capacity hard drive
- Up to six hours of 25 Mb/s DVCAM/DV video and audio recording
- Compact and lightweight (210 x 130 x 422 mm/ 8 3/8 x 5 1/8 x 16 5/8 inches, 7.5 kg/ 16 lb 10 oz)
- Simultaneous recording and playback capability
- Variable speed playback within a wide range of -2 to +2 times normal speed
- Smooth jog sound capability for easy designation of editing points.
- Clip segment playback for continuous playback of designated video segments
- Continuous loop recording allows recording to continue until stopped by operator
- Interval recording to produce recordings over extended periods
- Pre-alarm recording automatically triggers recording to start when an external alarm signal is detected
- VTR-like control panel with Jog/Shuttle dial
- Random access to files
- Synchronous playback via RS-422A
- Versatile interfaces
- i.LINK interface (6-pin) with AV/C and SBP2 protocols
- High-speed file transfer via i.LINK interface using SBP2 protocol
- File transfer of DV video and audio using FTP



Disk Recorder

### Supplied Accessories

AC power cord (1)  
RM-LG2 (remote control unit) (1)  
Operation manual (1)  
Warranty card (1)

### Optional Accessories

RCC-G Cables 9-pin/9-pin Cable  
CCF-L Cables DV Cables (6-pin to 6-pin)  
CCFD-L Cables DV Cables (6-pin to 4-pin)

### Specifications

#### General

Power requirements:  
AC 100 V to 240 V, 50/60 Hz  
Power consumption:  
60 W  
Operating temperature:  
5 °C to 40 °C (41 °F to 104 °F)  
Storage temperature:  
-20 °C to 60 °C (-4 °F to 140 °F)  
Operating humidity:  
Less than 80%  
Storage humidity:  
Less than 90%  
Mass:  
7.5 kg (16 lb 10 oz)  
Dimensions (W x H x D):  
210 x 130 x 422 mm (8 3/8 x 5 1/8 x 16 5/8 inches, without projection)

#### Video Performance

Bandwidth (via analog component I/O)  
Luminance: 25 Hz to 5.0 MHz +1.0  
Chrominance: 25 Hz to 2.0 MHz +1.0/-2.0 dB  
S/N ratio (via analog component I/O):  
More than 54 dB  
K-factor (K2T, KPB):  
Less than 2%  
Y/C delay:  
Less than 30 ns

### Audio Performance

Frequency response  
2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz  $\pm 1.0$  dB  
4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz  $\pm 1.0$  dB  
Dynamic range:  
More than 87 dB  
Distortion (THD + N):  
Less than 0.07% (48 kHz)

### Input Signals

VIDEO (ANALOG)  
REF. Video: BNC (2)  
0.3 Vp-p, 75  $\Omega$  sync negative  
Composite Video: BNC (2), loop-through connection (\*1)  
1.0 Vp-p, 75  $\Omega$ , sync negative  
Component: BNC (3) (\*1)  
Y: 1.0 Vp-p, 75  $\Omega$ , sync negative  
R-Y, B-Y: 0.7 Vp-p, 75  $\Omega$  (100% color bar)  
S-Video: BNC (2) (\*1)  
Y: 1.0 Vp-p, 75  $\Omega$ , sync negative  
C: 0.3 Vp-p, 75  $\Omega$  (at burst level)

### VIDEO (DIGITAL)

SDI: BNC (1)  
Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656  
i.LINK (DV): 6-pin (1)  
IEEE 1394-based

### AUDIO (ANALOG)

Audio: XLR 3-pin female (2)  
-6/-3/0/+4 dBu (selectable by menu), high impedance

### AUDIO (DIGITAL)

AES/EBU: BNC (2)  
75  $\Omega$ , unbalanced  
Time Code  
BNC (1), 0.5 Vp-p to 18.0 Vp-p, 3 k $\Omega$  unbalanced

### Output Signals

#### VIDEO (ANALOG)

Video 1/2 (SUPER): BNC (2) (\*2)  
Composite, 1.0 Vp-p, 75  $\Omega$ , sync negative  
Component: BNC (3) (\*2)  
Y: 1.0 Vp-p, 75  $\Omega$ , sync negative  
R-Y, B-Y: 0.7 Vp-p, 75  $\Omega$  (100% color bar)  
S-Video: BNC (2) (\*2)  
Y: 1.0 Vp-p, 75  $\Omega$ , sync negative  
C: 0.3 Vp-p, 75  $\Omega$  (at burst level)

#### VIDEO (DIGITAL)

SDI: BNC (2)  
Conforms to Serial Digital Interface (270 Mb/s), ITU-R BT.656  
i.LINK (DV): 6-pin (1)  
IEEE 1394-based

#### AUDIO (ANALOG)

Audio: XLR 3-pin male (2)  
-6/-3/0/+4 dBu (selectable by menu)  
Monitor: RCA (1)  
-9 dBu, 47 k $\Omega$ , unbalanced (-18 dBFS), volume center  
Headphone: JM-60 headphone jack (1)  
- $\infty$  to -11 dBu, 8  $\Omega$ , unbalanced (-18 dBFS)

#### AUDIO (DIGITAL):

AES/EBU: BNC (2), 75  $\Omega$ , unbalanced

#### TIME CODE:

BNC (1), 2.2 Vp-p, 600  $\Omega$ , unbalanced

#### REMOTE

RS-422A: D-sub 9-pin, female (2)  
Control: Mini jack (1)

#### Network

Ethernet (1): 10Base-T/100Base-TX Ethernet, RJ-45 modular jack

(\*1) Composite, Component and S-Video inputs share the same BNC connectors. (\*2) Composite, Component and S-Video outputs share the same BNC connectors.

## Disk Recorder

# MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)

### Features

- MPEG based multi-channel editing disk recorder for use in live, sports, news, and postproduction
- Adopts MPEG-2 4:2:2 Profile at Main Level with a selectable bit rate of 30Mb/s, 40Mb/s, or 50Mb/s
- In standard configuration, the system has 4I/O channels (1in/3out, 2in/2out, or 3in/1out) selectable from the startup menu
- Dedicated control panels with a jog/shuttle dial, hard keys, and a fader offers a linear-like environment
- Optional effects boards allow sophisticated real time effects
- Independently editable audio channels allow A/V-split, channel swap, voice over, and audio crossfades
- Digital Jog Sound (DJS) provides sound quality reminiscent of VTRs
- SDTI-CP option allows connection to other MPEG-2 devices and 2X file transfer
- Easily upgradeable to high definition (1080/59.94i)
- Gigabit Ethernet (GbE) option is available if you prefer asynchronous file transfer
- Separate model called the MAV-555SS will handle Sony Super Motion
- Capable of recording 10 hours of video at 30Mb/s

### Supplied Accessories

Operation Manual (1)  
Installation Manual (1)

### Optional Accessories

BKMA-506 Disk Recorder Control Panel Kit  
RMM-555 Rack Mounting Kit

### Optional Panels

BKMA-505 Control Panel

### Optional Boards

BKMA-513 AD/DA Converter Board  
BKMA-540 SDTI Board  
BKMA-550 Asynchronous Network Board  
BKMA-560 Video Effects Board  
BKMA-561 Video Effects Board

### Optional Software

BZMA-757 Contents Manager  
BZMA-E555 Contents Manager

### Optional Peripherals

BKMA-570 Analog Audio Expansion Unit  
BKNE-1011 Editing Fader Panel  
MAVE-D555 Dial Panel  
MAVE-F555 Editing Panel



# Disk Recorder

## Specifications

### General

#### Power requirements:

AC 90 V to 264 V, 48 Hz to 64 Hz

#### Power consumption:

Max. 500 W

#### Operating temperature:

+5°C to +40°C (+41°F to +104°F)

#### Storage temperature:

-20°C to +60°C (-4°F to +140°F)

#### Humidity:

25% to 80% (relative humidity)

#### Weight:

45 kg (100 lb)

#### Dimensions:

19 inch rack mountable 6U height  
424(W) x 286(H) x 629(D) mm  
(16 3/4 x 11 3/4 x 24 3/4 inches)

### Operational performance

#### Recording/Playback time:

Rate: Video 30 Mb/s, Audio 16 Bit (48 kHz) - 9 h 40 min  
Rate: Video 30 Mb/s, Audio 20 Bit (48 kHz) - 8 h 00 min  
Rate: Video 40 Mb/s, Audio 16/20 Bit (48 kHz) - 7 h 20 min  
Rate: Video 50 Mb/s, Audio 16/20 Bit (48 kHz) - 5 h 40 min

#### Search speed:

#### SHUTTLE mode:

Max.  $\pm 500$  times normal speed  
(Maximum speed range  $\pm 32$  /...  $\pm 100$  .../ $\pm 500$  selectable),  
frame by frame ( $\pm 4$  times)

#### JOG mode:

Up to  $\pm 4$  times normal speed

#### VAR mode:

Up to  $\pm 2$  times normal speed (When two ports occupied)

#### Cue up time:

Min. 0.5 s

#### Time shift:

Min. 60 frames

#### Clip:

Min. duration 1 frame, up to 5,000 clips

### Digital video performance

#### CODEC:

Compression:  
MPEG-2 4:2:2 Profile@ML GOP N=1 (intra)  
Bit rate:  
Max. 50 Mbps (50 Mb/s, 40 Mb/s, 30 Mb/s selectable)  
Encoding samples:  
Y:720/line, B-Y/R-Y:360/line  
Encoding lines:  
525:7 - 262, 270 - 525  
625:7 - 310, 320 - 623

#### Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y:6.75 MHz

#### Quantization:

8 bits/sample

#### Digital input to digital output:

Bandwidth:  
Y: 0.5 - 5.75 MHz +0.5/-0.75 dB  
R-Y/B-Y: 0.5 - 2.75 MHz +0.5/-0.75 dB

#### Analog composite input to analog composite output:

S/N ratio:  
More than 53 dB  
Differential gain:  
Less than 2%  
Differential phase:  
Less than 2°  
Y/C delay:  
Less than 20 ns  
K-factor (2T pulse):  
Less than 1%  
LF nonlinearity:  
Less than 3% (including quantization noise)

### Digital audio performance

#### Sampling frequency:

48 kHz

#### Quantization:

20/16 bits selectable

#### Analog input to output:

A/D and D/A quantization:  
20 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5/-1.0 dB (0 dB at 1 kHz)  
Dynamic range:  
More than 95 dB (at 1 kHz, emphasis ON, 20bits)  
Distortion:  
Less than 0.05%  
(at 1 kHz, emphasis ON, ref. level=+4 dBm)  
Crosstalk:  
Less than -85 dB  
(at 1 kHz, between any two channels, 20 bits)  
Head room:  
20 dB (18 dB selectable)  
Emphasis:  
T1=50 us, T2=15 us (ON/OFF selectable at recording)  
Input reference level:  
+4 dBm (+4/0/-1/-20 dBm selectable)

### Processor adjustment range

#### Video:

Video level:  
 $\pm 3$  dB/- $\infty$  to 3 dB selectable  
Chroma level:  
 $\pm 3$  dB/- $\infty$  to 3 dB selectable  
Set up/Black level:  
 $\pm 30$  IRE/ $\pm 210$  mV  
Hue/Chroma phase:  
 $\pm 30^\circ$   
System sync phase:  
 $\pm 30$  us (SC step)  
System SC phase:  
0-37 ns (0.3 ns step)

#### Audio:

Input level:  
- $\infty$  to 12 dB  
Output level:  
- $\infty$  to 12 dB  
Output phase:  
 $\pm 128$  samples

### Analog signal input

#### Video reference:

BNC (x2 loop-through connection), composite,  
0.3 Vp-p, 75  $\Omega$ , sync negative

#### Analog composite(option\*1):

BNC (x2 loop-through connection) x2 ports \*3  
1.0 Vp-p, 75  $\Omega$ , sync negative

#### Analog audio(option\*1\*2):

XLR (x4) x2 ports \*3  
-60 dBu, high impedance, balanced/  
+4 dBu, high impedance, balanced/  
+4 dBu, 600  $\Omega$  termination balanced selectable

#### Timecode reference:

BNC x1, 0.5 Vp-p  
- 18 Vp-p, 10 k $\Omega$ , unbalanced

#### Timecode:

BNC(x1) x2 ports, 0.5 Vp-p to 18 Vp-p, 10 k $\Omega$ , unbalanced

Note\*1 Using optional BKMA-513 (A/D D/A Converter Board).

Note\*2 Using optional BKMA-570 (Analog Audio Expansion Unit).

Note\*3 Supports R1 and R2 ports only (Does not support R3).

### Analog signal output

#### Analog composite (option\*4):

BNC (x2) x 3 ports, 1.0 Vp-p, 75 $\Omega$ , sync negative with  
character super

#### Analog audio (option\*4\*5):

XLR (x4) x3 ports,  
+4 dBu at 600  $\Omega$  load, low impedance, balanced

#### Timecode:

BNC (x1) x3 ports  
2.2 Vp-p at 600  $\Omega$  load, low impedance unbalanced

#### Video monitor:

BNC x1, composite, 1.0 Vp-p, 75  $\Omega$ , sync negative with  
character super

#### Audio monitor L/R:

XLR x2  
+4 dBu at 600  $\Omega$  load, low impedance, balanced

#### Headphones:

JM-60 stereo phone jack  
- $\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced

Note\*4 Using optional BKMA-513 (A/D D/A Converter Board).

Note\*5 Using optional BKMA-570 (Analog Audio Expansion Unit).

### Digital signal input/output

#### - Inputs -

##### SDI:

BNC (x2 active-through connection) x3 ports,  
SMPTE 259M

##### SDTI (option\*6):

BNC x1

##### Digital audio:

BNC (stereo pair x2) x3ports, AES/EBU

#### - Outputs -

##### SDI:

BNC (x2) x3 ports, SMPTE 259M

##### SDTI (option\*6):

BNC (x1)

##### Digital audio:

BNC (stereo pair x2) x3 ports, AES/EBU

##### Video monitor:

BNC x1, SMPTE 259M, with character super

Note\*6 Using optional BKMA-540 (SDTI Board)

### Remote

#### RS-422A:

Remote In 1/2/3/4:  
D-SUB 9-pin (F) x4, Sony 9-pin VTR protocol,  
Sony 9-pin Disk protocol

#### Remote Out 1/2:

D-SUB 9-pin (F) x2, for external VTR control  
(Sony 9-pin VTR protocol)  
Remote Parallel I/O:  
D-SUB 50-pin (F) x1, 24 inputs (5 V CMOS),  
24 outputs (Open collector)

#### Ethernet:

RJ45 x1, 10 Base-T

#### AUX:

D-SUB 9-pin (F) x1

#### — Network —

##### Gigabit Ethernet\*6:

Optical Gigabit Cable, 1000 Base-SX

Note\*7 Using optional BKMA-550, BZMA-E555, PC with NIC  
(Network Interface Card)

### Video effects

#### Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y:6.75 MHz, K: 13.5 MHz

#### Quantization:

8 bits/sample

#### Effects:

Using optional BKMA-560/561 (Video Effects Boards),  
the following effects can be built.

Board: BKMA-560

#### Effect pattern:

Dissolve, Wipe, Matrix Wipe, Split Screen  
Board: BKMA-560+561

#### Effect pattern:

Mosaic, Still Mirror, Y&C modify, Freeze, Strobe  
Cinema, Cropping, P in P, Zoom Up, Spotlight  
Center Image, Dynamic Mirror, Stream, Accordion,  
Multi-Screen  
Wave Modulation, Real Paint, Stained Glass, Slide,  
Split Slide  
Compress, Expand, 2-D Rotation, 2-D rotation +  
Compress + Slide  
2-D rotation + Compress + Slide (Variable), 3-D  
Rotation, Door  
Divided 3-D Rotation, 3-D + Compress + Slide, Album  
Tour  
Flip & Tumble, Twist, Page Turn, Page Turn (Variable)  
Divided Page Turn, Sphere, P in P Sphere

## Disk Recorder

# MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)

### Features

- MPEG based multi-channel editing disk recorder for use in live, sports, news, and postproduction
- Adopts MPEG-2 4:2:2 Profile at Main Level with a selectable bit rate of 30Mb/s, 40Mb/s, or 50Mb/s
- In standard configuration, the system has 4I/O channels (1in/3out, 2in/2out, or 3in/1out) selectable from the startup menu
- Dedicated control panels with a jog/shuttle dial, hard keys, and a fader offers a linear-like environment
- Optional effects boards allow sophisticated real time effects
- Independently editable audio channels allow A/V-split, channel swap, voice over, and audio crossfades
- Digital Jog Sound (DJS) provides sound quality reminiscent of VTRs
- SDTI-CP option allows connection to other MPEG-2 devices and 2X file transfer
- Easily upgradeable to high definition (1080/59.94i)
- Gigabit Ethernet (GbE) option is available if you prefer asynchronous file transfer
- Separate model called the MAV-555SS will handle Sony Super Motion
- Capable of recording 20 hours of video at 30Mb/s

### Supplied Accessories

Operation Manual (1)  
Installation Manual (1)

### Optional Accessories

BKMA-506 Disk Recorder Control Panel Kit  
RMM-555 Rack Mounting Kit

### Optional Panels

BKMA-505 Control Panel

### Optional Boards

BKMA-513 AD/DA Converter Board  
BKMA-540 SDTI Board  
BKMA-550 Asynchronous Network Board  
BKMA-560 Video Effects Board  
BKMA-561 Video Effects Board

### Optional Software

BZMA-757 Contents Manager  
BZMA-E555 Contents Manager

### Optional Peripherals

BKMA-570 Analog Audio Expansion Unit  
BKNE-1011 Editing Fader Panel  
MAVE-D555 Dial Panel  
MAVE-F555 Editing Panel



# Disk Recorder

## Specifications

### General

#### Power requirements:

AC 90 V to 264 V, 48 Hz to 64 Hz

#### Power consumption:

Max. 500 W

#### Operating temperature:

+5°C to +40°C (+41°F to +104°F)

#### Storage temperature:

-20°C to +60°C (-4°F to +140°F)

#### Humidity:

25% to 80% (relative humidity)

#### Weight:

45 kg (100 lb)

#### Dimensions:

19 inch rack mountable 6U height  
424(W) x 286(H) x 629(D) mm  
(16 3/4 x 11 3/4 x 24 3/4 inches)

### Operational performance

#### Recording/Playback time:

Rate: Video 30 Mb/s, Audio 16 Bit (48 kHz) - 19 h 20 min  
Rate: Video 30 Mb/s, Audio 20 Bit (48 kHz) - 16 h 00 min  
Rate: Video 40 Mb/s, Audio 16/20 Bit (48 kHz) - 14 h 40 min  
Rate: Video 50 Mb/s, Audio 16/20 Bit (48 kHz) - 11 h 20 min

#### Search speed:

#### SHUTTLE mode:

Max.  $\pm 500$  times normal speed  
(Maximum speed range  $\pm 32$  /...  $\pm 100$  .../ $\pm 500$  selectable),  
frame by frame ( $\pm 4$  times)

#### JOG mode:

Up to  $\pm 4$  times normal speed

#### VAR mode:

Up to  $\pm 2$  times normal speed (When two ports occupied)

#### Cue up time:

Min. 0.5 s

#### Time shift:

Min. 60 frames

#### Clip:

Min. duration 1 frame, up to 5,000 clips

### Digital video performance

#### CODEC:

Compression:  
MPEG-2 4:2:2 Profile@ML GOP N=1 (intra)  
Bit rate:  
Max. 50 Mbps (50 Mb/s, 40 Mb/s, 30 Mb/s selectable)  
Encoding samples:  
Y:720/ line, B-Y/R-Y:360/ line  
Encoding lines:  
525:7 - 262, 270 - 525  
625:7 - 310, 320 - 623

#### Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y:6.75 MHz

#### Quantization:

8 bits/sample

#### Digital input to digital output:

Bandwidth:  
Y: 0.5 - 5.75 MHz +0.5/-0.75 dB  
R-Y/B-Y: 0.5 - 2.75 MHz +0.5/-0.75 dB

#### Analog composite input to analog composite output:

S/N ratio:  
More than 53 dB  
Differential gain:  
Less than 2%  
Differential phase:  
Less than 2°  
Y/C delay:  
Less than 20 ns  
K-factor (2T pulse):  
Less than 1%  
LF nonlinearity:  
Less than 3% (including quantization noise)

### Digital audio performance

#### Sampling frequency:

48 kHz

#### Quantization:

20/16 bits selectable

#### Analog input to output:

A/D and D/A quantization:  
20 bits/sample  
Frequency response:  
20 Hz to 20 kHz +0.5/-1.0 dB (0 dB at 1 kHz)  
Dynamic range:  
More than 95 dB (at 1 kHz, emphasis ON, 20bits)  
Distortion:  
Less than 0.05%  
(at 1 kHz, emphasis ON, ref. level=+4 dBm)  
Crosstalk:  
Less than -85 dB  
(at 1 kHz, between any two channels, 20 bits)  
Head room:  
20 dB (18 dB selectable)  
Emphasis:  
T1=50 us, T2=15 us (ON/OFF selectable at recording)  
Input reference level:  
+4 dBm (+4/ 0 / - / -20 dBm selectable)

### Processor adjustment range

#### Video:

Video level:  
 $\pm 3$  dB/- $\infty$  to 3 dB selectable  
Chroma level:  
 $\pm 3$  dB/- $\infty$  to 3 dB selectable  
Set up/Black level:  
 $\pm 30$  IRE/ $\pm 210$  mV  
Hue/Chroma phase:  
 $\pm 30^\circ$   
System sync phase:  
 $\pm 30$  us (SC step)  
System SC phase:  
0-37 ns (0.3 ns step)

#### Audio:

Input level:  
- $\infty$  to 12 dB  
Output level:  
- $\infty$  to 12 dB  
Output phase:  
 $\pm 128$  samples

### Analog signal input

#### Video reference:

BNC (x2 loop-through connection), composite,  
0.3 Vp-p, 75  $\Omega$ , sync negative

#### Analog composite(option\*1):

BNC (x2 loop-through connection) x2 ports \*3  
1.0 Vp-p, 75  $\Omega$ , sync negative

#### Analog audio(option\*1\*2):

XLR (x4) x2 ports \*3  
-60 dBu, high impedance, balanced/  
+4 dBu, high impedance, balanced/  
+4 dBu, 600  $\Omega$  termination balanced selectable

#### Timecode reference:

BNC x1, 0.5 Vp-p  
- 18 Vp-p, 10 k $\Omega$ , unbalanced

#### Timecode:

BNC(x1) x2 ports, 0.5 Vp-p to 18 Vp-p, 10 k $\Omega$ , unbalanced

Note\*1 Using optional BKMA-513 (A/D D/A Converter Board).

Note\*2 Using optional BKMA-570 (Analog Audio Expansion Unit).

Note\*3 Supports R1 and R2 ports only (Does not support R3).

### Analog signal output

#### Analog composite (option\*4):

BNC (x2) x 3 ports, 1.0 Vp-p, 75 $\Omega$ , sync negative with  
character super

#### Analog audio (option\*4\*5):

XLR (x4) x3 ports,  
+4 dBu at 600  $\Omega$  load, low impedance, balanced

#### Timecode:

BNC (x1) x3 ports  
2.2 Vp-p at 600  $\Omega$  load, low impedance unbalanced

#### Video monitor:

BNC x1, composite, 1.0 Vp-p, 75  $\Omega$ , sync negative with  
character super

#### Audio monitor L/R:

XLR x2  
+4 dBu at 600  $\Omega$  load, low impedance, balanced

#### Headphones:

JM-60 stereo phone jack  
- $\infty$  to -12 dBu at 8  $\Omega$  load, unbalanced

Note\*4 Using optional BKMA-513 (A/D D/A Converter Board).

Note\*5 Using optional BKMA-570 (Analog Audio Expansion Unit).

### Digital signal input/output

#### - Inputs -

##### SDI:

BNC (x2 active-through connection) x3 ports,  
SMPTE 259M

##### SDTI (option\*6):

BNC x1

##### Digital audio:

BNC( stereo pair x2 ) x3ports, AES/EBU

#### - Outputs -

##### SDI:

BNC (x2) x3 ports, SMPTE 259M

##### SDTI (option\*6):

BNC (x1)

##### Digital audio:

BNC (stereo pair x2 ) x3 ports, AES/EBU

##### Video monitor:

BNC x1, SMPTE 259M, with character super

Note\*6 Using optional BKMA-540 (SDTI Board)

### Remote

#### RS-422A:

Remote In 1/2/3/4:  
D-SUB 9-pin (F) x4, Sony 9-pin VTR protocol,  
Sony 9-pin Disk protocol

##### Remote Out 1/2:

D-SUB 9-pin (F) x2, for external VTR control  
(Sony 9-pin VTR protocol)  
Remote Parallel I/O:  
D-SUB 50-pin (F) x1, 24 inputs (5 V CMOS),  
24 outputs (Open collector)

#### Ethernet:

RJ45 x1, 10 Base-T

#### AUX:

D-SUB 9-pin (F) x1

— Network —

#### Gigabit Ethernet\*6:

Optical Gigabit Cable, 1000 Base-SX

Note\*7 Using optional BKMA-550, BZMA-E555, PC with NIC  
(Network Interface Card)

### Video effects

#### Sampling frequency:

Y: 13.5 MHz, R-Y/B-Y:6.75 MHz, K: 13.5 MHz

#### Quantization:

8 bits/sample

#### Effects:

Using optional BKMA-560/561 (Video Effects Boards),  
the following effects can be built.

Board: BKMA-560

#### Effect pattern:

Dissolve, Wipe, Matrix Wipe, Split Screen  
Board: BKMA-560+561

#### Effect pattern:

Mosaic, Still Mirror, Y&C modify, Freeze, Strobe  
Cinema, Cropping, P in P, Zoom Up, Spotlight  
Center Image, Dynamic Mirror, Stream, Accordion,  
Multi-Screen  
Wave Modulation , Real Paint, Stained Glass, Slide,  
Split Slide  
Compress, Expand, 2-D Rotation, 2-D rotation +  
Compress + Slide  
2-D rotation + Compress + Slide (Variable), 3-D  
Rotation, Door  
Divided 3-D Rotation, 3-D + Compress + Slide, Album  
Tour  
Flip & Tumble, Twist, Page Turn, Page Turn (Variable)  
Divided Page Turn, Sphere, P in P Sphere

## Disk Recorder

# MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)

### Features

- MPEG based multi-channel editing disk recorder for use in super slow motion applications
- Configured with 3 input channels and 1 output channel in order to accept live video from Super Motion camera systems
- Functionality can be changed to be identical to the MAV-555A from the startup menu
- Capable of recording 10 hours of video at 30 Mb/s
- Gigabit Ethernet (GbE) option is available if you prefer asynchronous file transfer

### Supplied Accessories

- Operation Manual (1)
- Installation Manual (1)

### Optional Accessories

- BKMA-506 Disk Recorder Control Panel Kit
- RMM-555 Rack Mounting Kit

### Optional Panels

- BKMA-505 Control Panel

### Optional Boards

- BKMA-513 AD/DA Converter Board
- BKMA-540 SDTI Board
- BKMA-550 Asynchronous Network Board
- BKMA-560 Video Effects Board
- BKMA-561 Video Effects Board

### Optional Software

- BZMA-E555 Contents Manager

### Optional Peripherals

- BKMA-570 Analog Audio Expansion Unit
- BKNE-1011 Editing Fader Panel
- MAVE-D555 Dial Panel
- MAVE-F555 Editing Panel



## Disk Recorder

# MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)

### Features

- HD multi-channel editing disk recorder for use in live, sports, news, and postproduction
- Adopts HDCAM format
- In standard configuration, the system has 1 Input channel and 1 output channel. It can be upgraded to 2In/2Out, 1In/3Out, or 3In/1Out
- Dedicated control panels with a jog/shuttle dial, hard keys, and a fader offers a linear-like environment
- Optional effects boards allow simple effects such as dissolve, single wipe, and split screen
- Independently editable audio channels allow A/V-split, channel swap, voice over, and audio crossfades
- Digital Jog Sound (DJS) provides sound quality reminiscent of VTRs
- A Gigabit Ethernet (GbE) option kit is available if you prefer asynchronous file transfer
- Capable of recording 4 hours of High Definition video.

### Supplied Accessories

Operation Manual (1)

Installation Manual (1)

### Optional Accessories

BKMA-570 Analog Audio Expansion Unit

BKMA-506 Disk Recorder Control Panel Kit

RMM-555 Rack Mounting Kit

### Optional Boards

BKMA-720 HDCAM Input Board

BKMA-730 HDCAM Output Board

### Optional Software

BZMA-757 Contents Manager

### Optional Peripherals

BKNE-1011 Editing Fader Panel

MAVE-D555 Dial Panel

MAVE-F555 Editing Panel



Disk Recorder

# Disk Recorder

## Specifications

### General

Power requirements:  
AC 100 V to 240 V, 50 Hz to 60 Hz

Power consumption:  
Max. 550 W

Operating temperature:  
+5°C to +40°C (+41°F to +104°F)

Storage temperature:  
-20°C to +60°C (-4°F to +140°F)

Humidity:  
25% to 80% (relative humidity)

Weight:  
50 kg (110 lb)

Dimensions:  
19 inch rack mountable 6U height  
424(W) x 265(H) x 650(D) mm  
(16 3/4 x 10 1/2 x 25 5/8 inches)

### Operational performance

Recording/Playback time:  
4 Hours

Search speed:  
SHUTTLE mode:  
Max.  $\pm 500$  times normal speed  
(Maximum speed range  $\pm 32 \dots \pm 100 \dots \pm 500$  selectable),  
frame by frame ( $\pm 4$  times)

JOG mode:  
Up to  $\pm 4$  times normal speed

VAR mode:  
Up to  $\pm 1$  times normal speed (When two ports occupied)

Cue up time:  
Min. 0.5 s

Time delay:  
Min. 2 seconds

Clip:  
Min. duration 1 frame, up to 5,000 clips

### Digital video performance

Frame rate:  
1080/59.94i

Sampling frequency:  
Y: 74.25 MHz/1.001, Pb/Pr: 37.125/1.001 MHz

Quantization:  
10 bits/sample of input-output signal

Compression:  
DCT Intraframe, HDCAM format

### Digital audio performance

Sampling frequency:  
48 kHz

Quantization:  
20 bits

### Processor adjustment range

Video:  
Video level:  
 $\pm 3$  dB/ $\infty$  to 3 dB selectable

Chroma level:  
 $\pm 3$  dB/ $\infty$  to 3 dB selectable

Set up:  
 $\pm 30$  IRE

Hue:  
 $\pm 30^\circ$

System sync phase:  
0 $\pm 1$ H (13.5 ns step)

### Audio

Input level:  
 $\infty$  to 20 dB

Output level:  
 $\infty$  to 12 dB

Output phase:  
-127 to +128 samples

### Input/Output

#### 1-input/1-output configuration

Inputs:  
HD SDI:  
BNC (with monitoring loop-through) x1 port (R1)  
SMPTE 292M/BTA S-004/ITU-R.BT 709

HD reference video:  
BNC (with loop-through) x1

SD reference video:  
BNC (with loop-through) x1

Digital Audio:  
BNC (stereo pair x2) x1 port, AES/EBU

Time code:  
BNC x1 (R1)

System time code:  
BNC x1

Outputs:  
HD SDI:  
BNC x2 ports (P1)  
SMPTE 292M/BTA S-004/ITU-R.BT 709

Downconverted SDI:  
R1: BNC x1 port (with superimposed TC)  
P1: BNC x2 ports (one with superimposed TC)

Digital audio:  
BNC (stereo pair x2) x1 port, AES/EBU

Time code:  
BNC x1 (P1)

Video monitor:  
HD-SDI BNC x1 (with superimposed TC)  
SD-SDI x1 (with superimposed TC)  
Analog composite x1 (with superimposed TC)

Analog audio L/R:  
XLR-3-pin type x2

Headphones:  
JM-60 stereo phone jack

#### 1-input/3-output configuration

Inputs:  
HD SDI:  
BNC (with monitoring loop-through) x1 port (R1)  
SMPTE 292M/BTA S-004/ITU-R.BT 709

HD reference video:  
BNC (with loop-through) x1

SD reference video:  
BNC (with loop-through) x1

Digital Audio:  
BNC (stereo pair x2) x1 port, AES/EBU

Time code:  
BNC x1 (R1)

System time code:  
BNC x1

Outputs:  
HD SDI:  
BNC x6 ports (two each on P1, P2, P3)  
SMPTE 292M/BTA S-004/ITU-R.BT 709

Downconverted SDI:  
R1: BNC x1 port (with superimposed TC)  
P1: BNC x2 ports (one with superimposed TC)  
P2: BNC x2 ports (one with superimposed TC)  
P3: BNC x2 ports (one with superimposed TC)

Digital audio:  
BNC (stereo pair x2) x3 ports, AES/EBU

Time code:  
BNC x3 (P1, P2, P3)

Video monitor:  
HD-SDI BNC x1 (with superimposed TC)  
SD-SDI x1 (with superimposed TC)  
Analog composite x1 (with superimposed TC)

Analog audio L/R:  
XLR-3-pin type x2

### Headphones:

JM-60 stereo phone jack

#### 2-input/2-output configuration

Inputs:  
HD SDI:  
BNC (with monitoring loop-through) x2 ports (R1, R2)  
SMPTE 292M/BTA S-004/ITU-R.BT 709

HD reference video:  
BNC (with loop-through) x1

SD reference video:  
BNC (with loop-through) x1

Digital Audio:  
BNC (stereo pair x2) x2 ports, AES/EBU

Time code:  
BNC x2 (R1, R2)

System time code:  
BNC x1

### Outputs:

HD SDI:  
BNC x4 ports (two each on P1, P2)  
SMPTE 292M/BTA S-004/ITU-R.BT 709

Downconverted SDI:  
R1: BNC x1 port (with superimposed TC)  
R2: BNC x1 port (with superimposed TC)  
P1: BNC x2 ports (one with superimposed TC)  
P2: BNC x2 ports (one with superimposed TC)

Digital audio:  
BNC (stereo pair x2) x2 ports, AES/EBU

Time code:  
BNC x2 (P1, P2)

Video monitor:  
HD-SDI BNC x1 (with superimposed TC)  
SD-SDI x1 (with superimposed TC)  
Analog composite x1 (with superimposed TC)

Analog audio L/R:  
XLR-3-pin type x2

Headphones:  
JM-60 stereo phone jack

#### 3-input/1-output configuration

Inputs:  
HD SDI:  
BNC (with monitoring loop-through) x3 ports (R1, R2, R3)  
SMPTE 292M/BTA S-004/ITU-R.BT 709

HD reference video:  
BNC (with loop-through) x1

SD reference video:  
BNC (with loop-through) x1

Digital Audio:  
BNC (stereo pair x2) x3 ports, AES/EBU

Time code:  
BNC x2 (R1, R2)

System time code:  
BNC x1

Outputs:  
HD SDI:  
BNC x2 ports (P1)  
SMPTE 292M/BTA S-004/ITU-R.BT 709

Downconverted SDI:  
R1: BNC x1 port (with superimposed TC)  
R2: BNC x1 port (with superimposed TC)  
R3: BNC x1 port (with superimposed TC)  
P1: BNC x2 ports (one with superimposed TC)

Digital audio:  
BNC (stereo pair x2) x1 port, AES/EBU

Time code:  
BNC x1 (P1)

Video monitor:  
HD-SDI BNC x1 (with superimposed TC)  
SD-SDI x1 (with superimposed TC)  
Analog composite x1 (with superimposed TC)

Analog audio L/R:  
XLR-3-pin type x2

Headphones:  
JM-60 stereo phone jack

### Remote

RS-422A:  
Remote In 1/2/3/4:  
D-Sub 9-pin (F) x4, Sony 9-pin VTR protocol  
or Sony 9-pin Disk protocol

Remote In/Out 1/2:  
D-Sub 9-pin (F) x2, Sony 9-pin VTR control  
(for external VTR control)

Remote In (To MAVE-F555):  
D-Sub 9-pin (female) x1

Remote Parallel I/O:  
D-Sub 50-pin (F) x1, 24 inputs (5 V CMOS),  
24 outputs (Open collector)

Ethernet:  
RJ45 x1, 10 Base-T

TBC Remote P1/P2/P3:  
D-Sub 9-pin (female) x3, Sony 9-pin VTR protocol

### Video effects

Effects:  
Dissolve, Single Wipe, Split Screen

## Disk Recorder

# MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)

### Features

- HD multi-channel editing disk recorder for use in live, sports, news, and postproduction
- Adopts HDCAM format
- In standard configuration, the system has 1 Input channel and 1 output channel. It can be upgraded to 2In/2Out, 1In/3Out, or 3In/1Out
- Dedicated control panels with a jog/shuttle dial, hard keys, and a fader offers a linear-like environment
- Optional effects boards allow simple effects such as dissolve, single wipe, and split screen
- Independently editable audio channels allow A/V-split, channel swap, voice over, and audio crossfades
- Digital Jog Sound (DJS) provides sound quality reminiscent of VTRs
- A Gigabit Ethernet (GbE) option kit is available if you prefer asynchronous file transfer
- Capable of recording 8 hours of High Definition video.

### Supplied Accessories

Operation Manual (1)

Installation Manual (1)

### Optional Accessories

BKMA-750 Asynchronous Network Interface Kit

BKMA-506 Disk Recorder Control Panel Kit

RMM-555 Rack Mounting Kit

### Optional Panels

BKMA-505 Control Panel

### Optional Boards

BKMA-720 HDCAM Input Board

BKMA-730 HDCAM Output Board

### Optional Software

BZMA-757 Contents Manager

### Optional Peripherals

BKNE-1011 Editing Fader Panel

MAVE-D555 Dial Panel

MAVE-F555 Editing Panel



Disk Recorder

# Disk Recorder

## Specifications

### General

#### Power requirements:

AC 100 V to 240 V, 50 Hz to 60 Hz

#### Power consumption:

Max. 550 W

#### Operating temperature:

+5°C to +40°C (+41°F to +104°F)

#### Storage temperature:

-20°C to +60°C (-4°F to +140°F)

#### Humidity:

25% to 80% (relative humidity)

#### Weight:

50 kg (110 lb)

#### Dimensions:

19 inch rack mountable 6U height

424(W) x 265(H) x 650(D) mm

(16 3/4 x 10 1/2 x 25 5/8 inches)

### Operational performance

#### Recording/Playback time:

8 Hours

#### Search speed:

#### SHUTTLE mode:

Max.  $\pm 500$  times normal speed

(Maximum speed range  $\pm 32 \dots \pm 100 \dots \pm 500$  selectable),  
frame by frame ( $\pm 4$  times)

#### JOG mode:

Up to  $\pm 4$  times normal speed

#### VAR mode:

Up to  $\pm 1$  times normal speed (When two ports occupied)

#### Cue up time:

Min. 0.5 s

#### Time delay:

Min. 2 seconds

#### Clip:

Min. duration 1 frame, up to 5,000 clips

### Digital video performance

#### Frame rate:

1080/59.94i

#### Sampling frequency:

Y: 74.25 MHz/1.001, Pb/Pr: 37.125/1.001 MHz

#### Quantization:

10 bits/sample of input-output signal

#### Compression:

DCT Intraframe, HDCAM format

### Digital audio performance

#### Sampling frequency:

48 kHz

#### Quantization:

20 bits

### Processor adjustment range

#### Video:

##### Video level:

$\pm 3$  dB/ $\infty$  to 3 dB selectable

##### Chroma level:

$\pm 3$  dB/ $\infty$  to 3 dB selectable

##### Set up:

$\pm 30$  IRE

##### Hue:

$\pm 30^\circ$

##### System sync phase:

0 $\pm$ 1H (13.5 ns step)

#### Audio:

##### Input level:

$\infty$  to 20 dB

##### Output level:

$\infty$  to 12 dB

##### Output phase:

-127 to +128 samples

### Input/Output

#### 1-input/1-output configuration

##### Inputs:

##### HD SDI:

BNC (with monitoring loop-through) x1 port (R1)

SMPTE 292M/BTA S-004/ITU-R.BT 709

##### HD reference video:

BNC (with loop-through) x1

##### SD reference video:

BNC (with loop-through) x1

##### Digital Audio:

BNC (stereo pair x2) x1 port, AES/EBU

##### Time code:

BNC x1 (R1)

##### System time code:

BNC x1

##### Outputs:

##### HD SDI:

BNC x2 ports (P1)

SMPTE 292M/BTA S-004/ITU-R.BT 709

##### Downconverted SDI:

R1: BNC x1 port (with superimposed TC)

P1: BNC x2 ports (one with superimposed TC)

##### Digital audio:

BNC (stereo pair x2) x1 port, AES/EBU

##### Time code:

BNC x1 (P1)

##### Video monitor:

HD-SDI BNC x1 (with superimposed TC)

SD-SDI x1 (with superimposed TC)

Analog composite x1 (with superimposed TC)

##### Analog audio L/R:

XLR-3-pin type x2

##### Headphones:

JM-60 stereo phone jack

### 1-input/3-output configuration

##### Inputs:

##### HD SDI:

BNC (with monitoring loop-through) x1 port (R1)

SMPTE 292M/BTA S-004/ITU-R.BT 709

##### HD reference video:

BNC (with loop-through) x1

##### SD reference video:

BNC (with loop-through) x1

##### Digital Audio:

BNC (stereo pair x2) x1 port, AES/EBU

##### Time code:

BNC x1 (R1)

##### System time code:

BNC x1

##### Outputs:

##### HD SDI:

BNC x6 ports (two each on P1, P2, P3)

SMPTE 292M/BTA S-004/ITU-R.BT 709

##### Downconverted SDI:

R1: BNC x1 port (with superimposed TC)

P1: BNC x2 ports (one with superimposed TC)

P2: BNC x2 ports (one with superimposed TC)

P3: BNC x2 ports (one with superimposed TC)

##### Digital audio:

BNC (stereo pair x2) x3 ports, AES/EBU

##### Time code:

BNC x3 (P1, P2, P3)

##### Video monitor:

HD-SDI BNC x1 (with superimposed TC)

SD-SDI x1 (with superimposed TC)

Analog composite x1 (with superimposed TC)

##### Analog audio L/R:

XLR-3-pin type x2

##### Headphones:

JM-60 stereo phone jack

### 2-input/2-output configuration

##### Inputs:

##### HD SDI:

BNC (with monitoring loop-through) x2 ports (R1, R2)

SMPTE 292M/BTA S-004/ITU-R.BT 709

##### HD reference video:

BNC (with loop-through) x1

##### SD reference video:

BNC (with loop-through) x1

##### Digital Audio:

BNC (stereo pair x2) x2 ports, AES/EBU

##### Time code:

BNC x2 (R1, R2)

##### System time code:

BNC x1

##### Outputs:

##### HD SDI:

BNC x4 ports (two each on P1, P2)

SMPTE 292M/BTA S-004/ITU-R.BT 709

##### Downconverted SDI:

R1: BNC x1 port (with superimposed TC)

R2: BNC x1 port (with superimposed TC)

P1: BNC x2 ports (one with superimposed TC)

P2: BNC x2 ports (one with superimposed TC)

##### Digital audio:

BNC (stereo pair x2) x2 ports, AES/EBU

##### Time code:

BNC x2 (P1, P2)

##### Video monitor:

HD-SDI BNC x1 (with superimposed TC)

SD-SDI x1 (with superimposed TC)

Analog composite x1 (with superimposed TC)

##### Analog audio L/R:

XLR-3-pin type x2

##### Headphones:

JM-60 stereo phone jack

### 3-input/1-output configuration

##### Inputs:

##### HD SDI:

BNC (with monitoring loop-through) x3 ports (R1, R2, R3)

SMPTE 292M/BTA S-004/ITU-R.BT 709

##### HD reference video:

BNC (with loop-through) x1

##### SD reference video:

BNC (with loop-through) x1

##### Digital Audio:

BNC (stereo pair x2) x3 ports, AES/EBU

##### Time code:

BNC x2 (R1, R2)

##### System time code:

BNC x1

##### Outputs:

##### HD SDI:

BNC x2 ports (P1)

SMPTE 292M/BTA S-004/ITU-R.BT 709

##### Downconverted SDI:

R1: BNC x1 port (with superimposed TC)

R2: BNC x1 port (with superimposed TC)

R3: BNC x1 port (with superimposed TC)

P1: BNC x2 ports (one with superimposed TC)

##### Digital audio:

BNC (stereo pair x2) x1 port, AES/EBU

##### Time code:

BNC x1 (P1)

##### Video monitor:

HD-SDI BNC x1 (with superimposed TC)

SD-SDI x1 (with superimposed TC)

Analog composite x1 (with superimposed TC)

##### Analog audio L/R:

XLR-3-pin type x2

##### Headphones:

JM-60 stereo phone jack

### Remote

#### RS-422A:

Remote In 1/2/3/4:

D-Sub 9-pin (F) x4, Sony 9-pin VTR protocol

or Sony 9-pin Disk protocol

Remote In/Out 1/2:

D-Sub 9-pin (F) x2, Sony 9-pin VTR control

(for external VTR control)

Remote In (To MAVE-F555):

D-Sub 9-pin (female) x1

Remote Parallel I/O:

D-Sub 50-pin (F) x1, 24 inputs (5 V CMOS),

24 outputs (Open collector)

##### Ethernet:

RJ45 x1, 10 Base-T

##### TBC Remote P1/P2/P3:

D-Sub 9-pin (female) x3, Sony 9-pin VTR protocol

### Video effects

#### Effects:

Dissolve, Single Wipe, Split Screen

Video Server

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Video Server

## Video Server

# MAV-70XGI Transmission Server (511 GB Model)

### Features

- MPEG2 based server
- Selectable profiles, GOP, and bit rates
- Up to 5 I/O configurable either as inputs or outputs with optional I/O boards
- Networked system interconnection with Fibre Channel and Ethernet
- Near-line data tape storage from hundreds of Gigabytes to million of Gigabytes
- High reliability - RAID-3 storage, hot swappable components and redundant PSUs
- Open architecture
- Large storage capacity of 511 GB
- Allows user to enter closed caption information, VITC, and any other user defined parameter in the VBI (Vertical Blanking Interval)
- Compact 5U rack mountable one-piece-design



Video Server

### Optional Accessories

MAV-EX70 I/O Extension Chassis  
 BKMA-7021 MPEG Encoder Board With 8-CH Audio  
 BKMA-7030 MPEG Decoder Board  
 BKMA-7031 MPEG Decoder Board With 8-CH Audio  
 BKMA-7045 Gigabit Ethernet Adapter  
 BKMA-7050 A/D Daughter Board  
 BKMA-7060 D/A Daughter Board  
 BKMA-7070 100Base-T Board  
 BKSR-2090 DVB-ASI Board  
 BKMA-7010 SDI Encoder/Decoder Board  
 BKMA-7020 Encoder Board  
 BKMA-7040 Fibre Channel Port Board  
 BKMA-PS70 Optional, Redundant PSU  
 BZA-900 Multi-Channel Manager Software  
 BZA-820 Transmission Management Software  
 BZA-821 I/O Expansion Option Software  
 BZA-822 Time Shift Option Software  
 BZA-823 Copy Management Option Software  
 BKMA-7030 Decoder Board

### Specifications

#### General

Power supply:  
 AC 100 - 240 V, 50/60 Hz  
 Power consumption:  
 620 W  
 Operating temperature:  
 +5°C to +40°C (41°F to 104°F)  
 Dimensions:  
 220 × 424 × 630 mm  
 (H/W/D)(Approx.)  
 (8 3/4 × 16 3/4 × 24 7/8 inches)  
 Mass (Approx.):  
 50 kg (110 lb 4 oz)

#### HDD Characteristics

Array composition:  
 RAID-3  
 Data drives: 7  
 Parity drive: 1

#### Recording capacity:

73 x 7 = 511 GB

#### Internal HDD interface:

SCSI-2 Fast/Wide single-ended,  
 hot-swappable

#### Video

##### Compression Format:

MPEG-2 MP@ML  
 NTSC: M=3, N=15  
 PAL: M=3, N=12  
 MPEG-2 4:2:2P@ML  
 \*24 Mb/s or lower  
 NTSC: M=3, N=15  
 PAL: M=3, N=12  
 \*25 Mb/s or higher  
 NTSC/PAL: M=1, N=1

##### Bit rate:

MP@ML: 1.5 to 15 Mb/s  
 4:2:2P@ML: 3.0 to 50 Mb/s

#### Audio

##### Signal:

Linear PCM 16-bit, or  
 MPEG-1 Layer II

#### Input/Output

##### Time Code In:

\*XLR 3-pin, female (1)  
 \*0.5 to 18.0 Vp-p, 10kΩ, balanced

##### Ref. Video In:

\*BNC type (1 input and 1 loop-through output)  
 \*Black burst signal: sync, burst 0.3 Vp-p, 75Ω

##### Remote:

\*RS-422A port, D-sub 9-pin (5)

##### Ether:

\*RJ-45 modular jack (1)  
 \*Conforms to Ethernet IEEE 802.3 standards

##### Spare:

\*D-sub 9-pin (2)

##### Video:

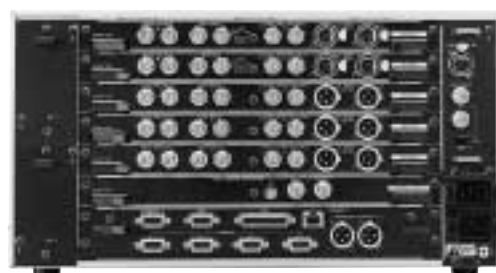
\*(Note: see optional accessories)

## Video Server

# MAV-70XGI Transmission Server (252 GB Model)

### Features

- MPEG-2 based server
- Selectable profiles, GOP, and bit rates
- Up to five I/O configurable either as inputs or outputs with optional I/O boards
- Networked system interconnection with Fibre Channel and Ethernet
- Near-line data tape storage from hundreds of Gigabytes to million of Gigabytes
- High reliability RAID-3 storage, hot swappable components and redundant PSUs
- Open architecture
- Large storage capacity of 252 GB
- Allows user to enter closed caption information, VITC, and any other user defined parameter in the VBI (Vertical Blanking Interval)
- Compact 5U rack mountable one-piece-design



Video Server

### Optional Accessories

MAV-EX70 I/O Extension Chassis  
 BKMA-7021 MPEG Encoder Board With 8-CH Audio  
 BKMA-7030 MPEG Decoder Board  
 BKMA-7031 MPEG Decoder Board With 8-CH Audio  
 BKMA-7045 Gigabit Ethernet Adapter  
 BKMA-7050 A/D Daughter Board  
 BKMA-7060 D/A Daughter Board  
 BKMA-7070 100Base-T Board  
 BKSR-2090 DVB-ASI Board  
 BKMA-7010 SDI Encoder/Decoder Board  
 BKMA-7020 Encoder Board  
 BKMA-7040 Fibre Channel Port Board  
 BKMA-PS70 Optional, Redundant PSU  
 BZA-900 Multi-Channel Manager Software  
 BZA-820 Transmission Management Software  
 BZAA-821 I/O Expansion Option Software  
 BZAA-822 Time Shift Option Software  
 BZAA-823 Copy Management Option Software  
 BKMA-7030 Decoder Board

### Specifications

#### General

Power supply:  
 AC 100 - 240 V, 50/60 Hz  
 Power consumption:  
 620 W  
 Operating temperature:  
 +5°C to +40°C (41°F to 104°F)  
 Dimensions:  
 220 × 424 × 630 mm  
 (H/W/D)(Approx.)  
 (8 3/4 × 16 3/4 × 24 7/8 inches)  
 Mass (Approx.):  
 50 kg (110 lb 4 oz)

#### HDD Characteristics

Array composition:  
 RAID-3  
 Data drives: 7  
 Parity drive: 1

#### Recording capacity:

36 x 7 = 252 GB

#### Internal HDD interface:

SCSI-2 Fast/Wide single-ended,  
 hot-swappable

#### Video

##### Compression Format:

MPEG-2 MP@ML  
 NTSC: M=3, N=15  
 PAL: M=3, N=12  
 MPEG-2 4:2:2P@ML  
 \*24 Mb/s or lower  
 NTSC: M=3, N=15  
 PAL: M=3, N=12  
 \*25 Mb/s or higher  
 NTSC/PAL: M=1, N=1

##### Bit rate:

MP@ML: 1.5 to 15 Mb/s  
 4:2:2P@ML: 3.0 to 50 Mb/s

#### Audio

##### Signal:

Linear PCM 16-bit, or  
 MPEG-1 Layer II

#### Input/Output

##### Time Code In:

\*XLR 3-pin, female (1)  
 \*0.5 to 18.0 Vp-p, 10kΩ, balanced

##### Ref. Video In:

\*BNC type (1 input and 1 loop-through output)  
 \*Black burst signal: sync, burst 0.3 Vp-p, 75Ω

##### Remote:

\*RS-422A port, D-sub 9-pin (5)

##### Ether:

\*RJ-45 modular jack (1)  
 \*Conforms to Ethernet IEEE 802.3 standards

##### Spare:

\*D-sub 9-pin (2)

##### Video:

\*(Note: see optional accessories)

## Video Server

# MAV-S2000 MAV-S2000 Multi Access Video and Audio Server

### Features

- High-accuracy editing ●Flexible system configuration
- Fast and flexible editing ●Large storage capacity, over 100 hours storage ●Powerful RAID HDDs ●Fault tolerance ●Video playback process control

### Optional Accessories

BKMA-2010 Input and Output Processor Board

BKMA-2050 Asynchronous Network Board

BKMA-2040 SDTI Board

### Specifications

#### GENERAL

Power requirement

AC 100 to 240 V +/- 10%, 50/60 Hz

Power consumption

Max 600 W

Operating temperature

+5 °C to +40 °C (+41 °F to +104 °F)

Storage temperature

-20 °C to +60 °C (-4 °F to +140 °F)

Operating humidity

20% to 90% (no humidity condensation)

Mass

Approx. 55 kg (121 lb 4 oz)

Dimensions (w/h/d)

424 x 265.6 x 638 mm

(16 3/4 x 10 1/2 x 25 5/8 inches)

#### INPUT/OUTPUT

Serial bus extension input

BNC type (8)

270 Mb/s, 75 Ω

Serial bus extension output

BNC type (8)

270 Mb/s, 75Ω

Reference video input (Analog)

BNC type (1 input, 1 loop-through output)

Black burst signal, 0.3 Vp-p, 75 Ω, or

Composite video signal, 1 Vp-p, 75 Ω

With 75 Ω termination switch

Time code input

BNC type (1)

0.5 to 18.0 Vp-p, 10 KΩ, unbalanced

VS-Bus

BNC type (1)

1.3±0.3 V, 75 Ω (internally terminated)

Ethernet

RJ-45 modular jacks (2)

10Base-T

Conforms to Ethernet IEEE 802.3

Balanced input

Status output (parallel)

D-sub 9-pin, female (1)

#### BKMA-2010 installed

SDI input

BNC type (1) x2 ports

SMPTE 259M/ITU-R656

(270 Mb/s)

AES/EBU digital audio inputs

BNC type (4) x2 ports

AES-3id-1995

SDI output

BNC type (1) x 2 ports

SMPTE 259M/ITU-R656 (270 Mb/s)

AES/EBU digital audio outputs

BNC type (4) x2 ports

AES-3id-1995

Remote

RS-422A, D-sub 9-pin,

Female (1) x 2 ports

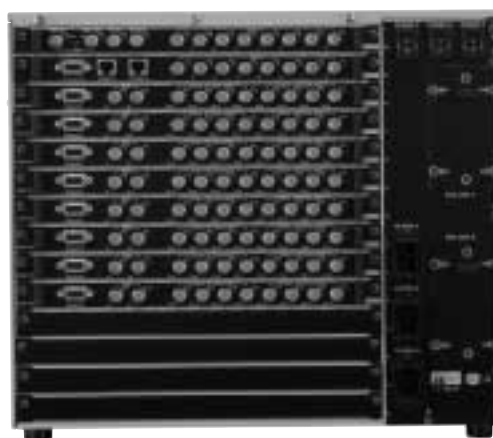


## Video Server

# MAV-2000 MAV-2000 Multi-Access Video and Audio Server

### Features

- Superb picture quality using MPEG-2 4:2:2P@ML compression with a selectable bit rate of 30, 40, or 50Mb/s
- Flexible system configuration
- Large storage capacity - over 100 hours of audio and video storage
- Up to 12 simultaneous inputs and outputs
- Synchronous SDTI-CP or Asynchronous I/F offers high speed file transfer
- RAID level-6 hot swappable HDDs, redundant power supplies, and backup functions offer high reliability and fault tolerance
- Video playback process control
- Can be used as a Daily Server or an On Air Server within the NewsBase System



Video Server

### Optional Accessories

BKMA-2010 Input and Output Processor Board  
 BKMA-2050 Asynchronous Network Board  
 BKMA-2040 SDTI Board

### Specifications

#### GENERAL

**Power requirement**  
 AC 100 to 240 V +/- 10%, 50/60 Hz

**Power consumption**  
 Max 800 W

**Operating temperature**  
 +5 °C to +40 °C (+41 °F to +104 °F)

**Storage temperature**  
 -20 °C to +60 °C (-4 °F to +140 °F)

**Operating humidity**  
 20% to 90% (no humidity condensation)

**Mass**  
 Approx. 41 kg (90 lb 6 oz) (with no option boards installed)

**Dimensions (w/h/d)**  
 424 x 355 x 650 mm  
 (16 3/4 x 14x 25 5/8 inches)

#### INPUT/OUTPUT

**Serial bus extension input**  
 BNC type (8)  
 270 Mb/s, 75 Ω

**Serial bus extension output**  
 BNC type (8)  
 270 Mb/s, 75Ω

#### Reference video input (Analog)

BNC type (1 input, 1 loop-through output)  
 Black burst signal, 0.3 Vp-p, 75 Ω, or  
 Composite video signal, 1 Vp-p, 75 Ω  
 With 75 Ω termination switch

#### Time code input

BNC type (1)  
 0.5 to 18.0 Vp-p, 10 KΩ, unbalanced

#### VS-Bus

BNC type (1)  
 1.3±0.3 V, 75 Ω (internally terminated)

#### Ethernet

RJ-45 modular jacks (2)  
 10Base-T  
 Conforms to Ethernet IEEE 802.3  
 Balanced input

#### Status output (parallel)

D-sub 9-pin, female (1)

#### BKMA-2010 installed

##### SDI input

BNC type (1) x2 ports  
 SMPTE 259M/ITU-R656  
 (270 Mb/s)

##### AES/EBU digital audio inputs

BNC type (4) x2 ports  
 AES-3id-1995

##### SDI output

BNC type (1) x 2 ports  
 SMPTE 259M/ITU-R656 (270 Mb/s)

#### AES/EBU digital audio outputs

BNC type (4) x2 ports  
 AES-3id-1995

#### Remote

RS-422A, D-sub 9-pin,  
 Female (1) x 2 ports

## Video Server

# VSR-2000A Multi Access Video and Audio Server

### Features

- Incorporates encoders, decoders, and storage devices in one compact body
- Accommodates both HD (MPEG-2 MP@HL 24 Mb/s) and SD (MPEG-2 MP@ML up to 15 Mb/s) encoders and decoders (Note: The HD encoder board requires two slots. Also, the HD signal is 1080/59.94i; HD and SD can be mixed when the signals are 1080/59.94i and 525/59.94i; however, 1080/59.94i and 625/50i signals cannot be mixed)
- For optimum encoding in SD, the bit rate is selectable over the range of 2Mb/s to 15Mb/s
- Clips encoded at different bit rates can be stored in the same server
- Back-to-back playout with no break between segments
- Five RAID-3 hard drives (up to 73GB each)
- Hard disks are hot swappable
- In Points and Out Points of various programs can be selected and arranged for playout in an assigned order
- Shuttle function provides quick Search and Pause
- Equipped with an RS-232C or RS-422A interface for control
- Five slots for optional I/O boards allows flexible configuration
- Optional output boards provide HD signals, analog (composite, component, R/G/B) signals, or SDI signals
- The MPEG-2 file data can be transferred via Ethernet (10Base-T or 100Base-T) (Note: The VSR-2000A incorporates a 100Base-T interface)
- A DVB-ASI board compliant with CATV and satellite multiple-channel broadcasting is available for outputting MPEG transport streams (Note: The DVB-ASI board supports SD at a bit rate of 2-8 Mb/s only. HD is not supported).

### Optional Accessories

BKSH-236G 36 GB HDD Unit  
 BKSH-272G 73 GB HDD Unit  
 RMM-2000 Rack Mount Kit  
 BKSR-U2000 Upgrade Kit

### Optional Boards

BKSR-2020 SDI MPEG Encoder Board  
 BKSR-2025 MPEG HD Encoder Board  
 BKSR-2090 DVB-ASI Board  
 BKSR-2031 Analog MPEG Decoder Board  
 BKSR-2021 Analog MPEG Encoder Board  
 BKSR-2035 MPEG HD Decoder Board  
 BKSR-2030 SDI MPEG Decoder Board  
 BKSR-2070 100Base-T Board

### Optional Software

BZSR-2000 Playout Control Software



Video Server

Specifications

General

Power requirement:

AC100 V to 240 V, 50/60 Hz

Power consumption:

500 W

Dimension (w x h x d):

424 x 221 x 655 (mm),

16 3/4 x 8 3/4 x 25 7/8 (inches)

Mass:

43 kg (approximately)

HD Encoder Board, BKSR-2025 (requires two expansion slots)

Video

Compression format:

MPEG-2 MP@HL

Bit rate:

24 Mb/s

Input signal:

HD SDI (SMPTE 292M)

Interface:

HD SDI Input: BNC x1

HD SDI Monitor Out: BNC x1

AES-3 Input: BNC x4

Format:

1080/59.94i

Resolution:

1920 x 1080

Aspect ratio:

16:9

Audio

Signal:

HD SDI Embedded Audio (SMPTE 292M)

Interface:

AES/EBU BNC x4

Sampling frequency:

48 kHz (Video locked)

Channels:

4 or 8 Channels (Linear PCM)

Signal mode:

Linear PCM 16-bit or 20-bit

HD Decoder Board, BKSR-2035

Video

Bit rate:

24 MB/s

Output signal:

HD SDI (SMPTE 292M)

Interface:

HD SDI Output: BNC x2

AES-3 Output: BNC x4

Format:

1080/59.94i

Resolution:

1920 x 1080

Aspect ratio:

16:9

Audio

Output signal:

HD SDI Embedded Audio (SMPTE 292M)

Interface:

AES/EBU BNC x4

Sampling frequency:

48 kHz (Video locked)

Channels:

4 or 8 Channels (Linear PCM)

Signal mode:

Linear PCM 16-bit or 20-bit

SD Encoder Boards, BKSR-2020 and BKSR-2021

Video

Compression format:

MPEG-2 MP@ML

Bit rate:

2-15 Mb/s

Input signal:

BKSR-2020 SDI:BNC (1 ch)

BKSR-2021 Analog composite/Analog component

Interface:

BKSR-2020 BNC x1

BKSR-2021 Analog composite BNC x1/Analog component BNC x3

Format:

525/59.94i, 625/50i

Resolution:

NTSC: 720 x 480/PAL: 720 x 576

Aspect ratio:

4:3

Audio

Signal:

BKSR-2020 SDI (embedded with video)

MPEG-1 Audio Layer 2 or Linear PCM, 16 bits (4ch)

BKSR-2021 Analog (2ch): XLR 3-pin x2 Male

Format:

MPEG-1, Audio layer II

Bit rate:

384 kb/s

Sampling frequency:

48 kHz

SD Decoder Boards, BKSR-2030/1 and BKSR-2031

Video

Output signal:

BKSR-2030/1 SDI: BNC (1ch)

BKSR-2031 Analog composite (2ch), Analog component (1ch), or RGB (1ch): BNC x3

Interface:

BKSR-2030/1 BNC x2

BKSR-2031 Analog composite BNC x1, Analog component BNC x3

Format:

525/59.94i, 525/50i

Resolution:

NTSC: 720 x 480/PAL: 720 x 576

Aspect ratio:

4:3

Audio

Signal:

BKSR-2030/1 Digital (4ch): SDI

(embedded with video), Digital (4ch): 2x AES/EBU BNC for PCM, Analog (2ch): XLR 3-pin x2 Male

BKSR-2031 Analog (2ch): XLR 3-pin x2 Male

DVB-ASI Board, BKSR-2090

DVB-ASI

ASI Packet Length:

188 Bytes

Interface:

DVB-ASI Input: BNC x1

DVB-ASI Monitor Output: BNC x1

DVB-ASI Output: BNC x2

Video

Compression format:

MPEG-2 MP@ML (NTSC/PAL)

Format:

525/59.94i, 625/50i

Resolution:

NTSC: 720 x 480/PAL: 720 x 576

Bit rate:

2-8 Mb/s

GOP Structure:

N=15, M=3 (59.94 Hz)/N=12, M=3(50 Hz)

Audio

Format:

MPEG-1, Audio layer II

Bit rate:

384 kb/s

Sampling frequency:

48 kHz

Hard Disk Drive Unit

Storage Capacity

BKSH-236G:

36 GB (x5): 180 GB Recording capacity:

144 GB)

BKSH-272G:

73 GB (x5): 365 GB Recording capacity:

292 GB)

Control

Remote:

D-sub 9-pin RS-232C (Male)/RS-422A (Female) selectable

VTR Control:

D-sub 9-pin RS-422A (Female)

GPI:

D-sub 25-pin (Female)

Ethernet:

10Base-T

Video Server



Video Server

## Video Server and Disk Recorder Accessories

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## Video Server and Disk Recorder Accessories

### BKMA-2010 Input and Output Processor Board

Input and output processor board for use with the  
MAV-2000 Series of servers

#### Applicable Models

MAV-2000 MAV-2000 Multi-Access Video  
and Audio Server

MAV-S2000 MAV-S2000 Multi Access Video  
and Audio Server

#### Specifications

##### **BKMA-2010**

##### SDI Input:

BNC type (1) x2 ports

SMPTE 259M/ITU-R656 (270 Mb/s)

##### AES/EBU digital audio inputs:

BNC type (4) x2 ports

AES-3id-1995

##### SDI Output:

BNC type (1) x2 ports

SMPTE 259M/ITU-R656 (270 Mb/s)

##### AES/EBU digital audio outputs:

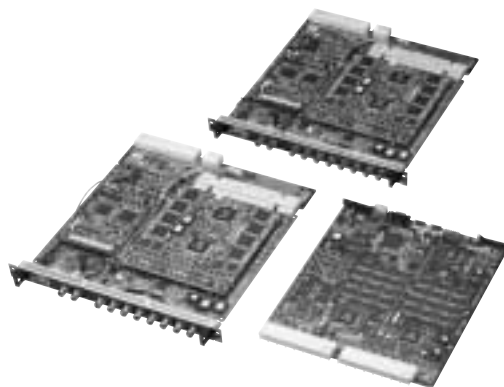
BNC type (4) x2 ports

AES-3id-1995

##### Remote:

RS-422A, D-sub 9-pin

female (1) x2 ports



### BKMA-2050 Asynchronous Network Board

#### Features

- Asynchronous network board for use with MAV-2000

#### Series of servers

#### Applicable Models

MAV-2000 MAV-2000 Multi-Access Video  
and Audio Server

MAV-S2000 MAV-S2000 Multi Access Video  
and Audio Server

## Video Server and Disk Recorder Accessories

### BKMA-505 Control Panel

#### Features

- VTR-style user interface
- 6.4-inch high-resolution color LCD information display
- Exploits the features of a non-linear device
- Jog/Shuttle and direct input of numeric values
- Audio/video file management functions

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
 MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
 MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)



### BKMA-506 Disk Recorder Control Panel Kit

For use with the BKMA-505 control panel

#### Features

- Allows BKMA-505 to be mounted remotely in an ergonomically correct work position
- Includes 10-meter cable

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
 MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
 MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)



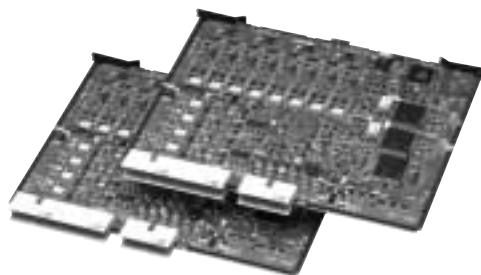
## Video Server and Disk Recorder Accessories

### BKMA-513 AD/DA Converter Board

\*Converts signals from analog to digital and digital to analog to provide analog composite inputs and outputs  
\*includes two A/D converters and three D/A converters  
\*Allows the MAV-555A to interface with analog VTRs or to accept analog audio signals \*Provides time code superimposition on the composite B outputs \*Allows use of the BKMA-570 Analog Audio Expansion Unit.

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)



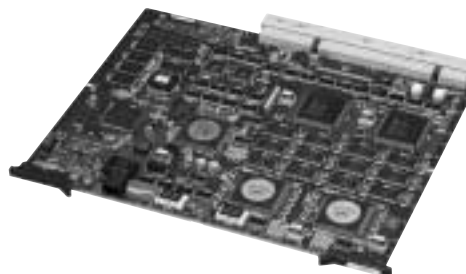
### BKMA-540 SDTI Board

#### Features

●Allows file transfer at up to two times the normal speed with no degradation through an SDTI-CP interface as defined by the SMPTE 305M standard.

#### Applicable Models

DNE-2000 Digital News Editing System  
MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)



## Video Server and Disk Recorder Accessories

### BKMA-550 Asynchronous Network Board

#### Features

- Used in conjunction with a PC configured as a gateway, supports Gigabit Ethernet (GbE)
- Allows the disk recorder to transfer files asynchronously via optical gigabit cable, 1000 Base-SX.
- Requires the BZMA-E555 Contents Messenger software and a PC with a Network Interface Card (NIC).

#### Applicable Models

BZMA-757 Contents Manager  
MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)

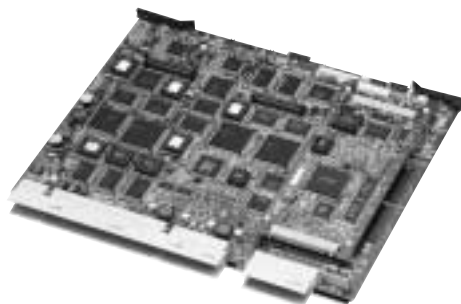
### BKMA-560 Video Effects Board

#### Features

- Offers a variety of video effects such as dissolve, wipe, matrix wipe, and split screen
- Used in combination with the BKMA-561 Video Effects Board, more sophisticated 2-D and 3-D video effects are available
- When using the MAV-555, the BKMA-510 or BKMA-530 options are required for A/B roll editing
- With the MAV-555A or MAV-555SS, no other options are required.

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)



## Video Server and Disk Recorder Accessories

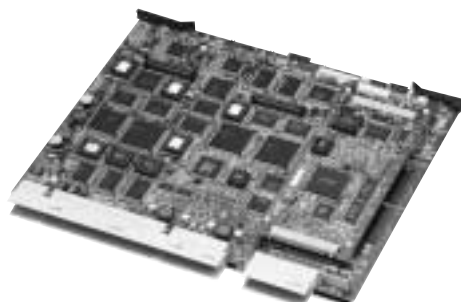
### BKMA-561 Video Effects Board

#### Features

- Mounts to the BKMA-560 Video Effects Board
- Used for sophisticated 2-D and 3-D video effects such as mosaic, compress, 3-D rotation, twist, flip & tumble, page turns, etc.
- When using the MAV-555, the BKMA-510 or BKMA-530 options are required for A/B roll editing
- With the MAV-555A or MAV-555SS, no other options are required.

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
 MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
 MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)



### BKMA-570 Analog Audio Expansion Unit

#### Features

- 2U rack mountable analog audio expansion unit
- Connects to Remote Parallel I/O 50-pin connector on the rear panel
- Provides analog audio inputs and outputs through XLR-type audio connectors
- Increases the number of analog audio channels to 8-in and 12-out.

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
 MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
 MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)



## Video Server and Disk Recorder Accessories

### BKMA-7010 SDI Encoder/Decoder Board

#### Features

●An SDI encoder/decoder board for use with MAV-70/70XGI Transmission Server. The BKMA-7010 accepts and outputs component digital SDI signal. It also supports MPEG-2 4:2:2P@ML and MP@ML from 1.5 to 24 Mb/s long GoP and 30 to 80 Mb/s I-frame only.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

### BKMA-7020 Encoder Board

#### Features

●An encoder board for use with MAV-70/70XGI Transmission Server. The BKMA-7020 accepts component digital SDI and analog signal (with optional BKMA-7050 board fitted). It also supports MPEG-2 4:2:2P@ML and MP@ML from 1.5 to 24 Mb/s long GoP and 30 to 50 Mb/s I-frame only.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

### BKMA-7021 MPEG Encoder Board With 8-CH Audio

#### Features

●An MPEG encoder board with 8-ch audio for use with MAV-70/70XGI Transmission Server. The BKMA-7021 accepts component digital SDI signal, and supports MPEG-2 4:2:2P@ML and MP@ML from 1.5 to 24 Mb/s long GoP.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

### BKMA-7030 MPEG Decoder Board

#### Features

●An MPEG decoder board for use with MAV-70/70XGI Transmission Server. The BKMA-7030 outputs component digital SDI and analog composite (with optional BKMA-7060 board fitted). It also supports MPEG-2 4:2:2P@ML and MP@ML from 1.5 to 24 Mb/s long GoP.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

## Video Server and Disk Recorder Accessories

### BKMA-7030/1 Decoder Board

#### Features

- A decoder board for use with MAV-70/70XGI Transmission Server. The BKMA-7030/1 outputs component digital SDI and analog composite (with optional BKMA-7060 board fitted). It also supports MPEG-2 4:2:2P@ML and MP@ML from 1.5 to 24 Mb/s long GoP, and 30 to 50 Mb/s I-frame only.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

### BKMA-7031 MPEG Decoder Board With 8-CH Audio

#### Features

- An MPEG decoder board with 8-channel audio for use with MAV-70/70XGI Transmission Server. The BKMA-7031 outputs component digital SDI, and supports MPEG-2 4:2:2P@ML and MP@ML from 1.5 to 24 Mb/s long GoP.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

### BKMA-7040 Fibre Channel Port Board

#### Features

- A fibre channel port board for use with the MAV-70/70XGI Transmission Server. The BKMA-7040 is used to interconnect multiple MAV-70/70XGI for storage expansion and high-speed file transfer. Up to eight MAV-70/70XGI units can be interconnected.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

### BKMA-7045 Gigabit Ethernet Adapter

#### Features

- An ultra SCSI interface board and software application for a gateway to transfer data at high speeds between multiple MAV-70/70XGIs via Gigabit Ethernet.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

## Video Server and Disk Recorder Accessories

### BKMA-7050 A/D Daughter Board

#### Features

- An analog to digital daughter board for use with MAV-70/70XGI Transmission Server. The BKMA-7050 is used in conjunction with the BKMA-7020 to accept analog PAL/NTSC signals.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

### BKMA-7060 D/A Daughter Board

#### Features

- A digital to analog daughter board for use with MAV-70/70XGI Transmission Server. The BKMA-7060 is used in conjunction with the BKMA-7030 to provide analog PAL/NTSC signals.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

### BKMA-7070 100Base-T Board

#### Features

- A 100Base-T board for use with MAV-70/70XGI Transmission Server. The BKMA-7070 provides file transfer by 100Base-T Ethernet and is installed on the main system board. A standard 10Base-T board installed on the system board only provides File System (FS) backup/restore. The BKMA-7070 board is required for a MAV-70XGI to provide A/V file transfer and/or Telnet interface.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

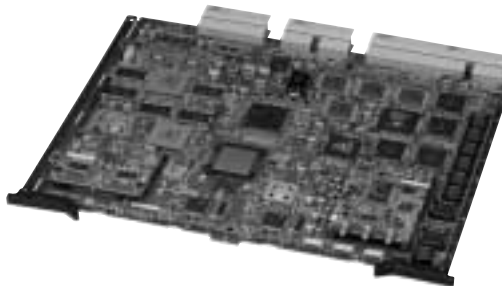
### BKMA-720 HDCAM Input Board

#### Features

- Provides an HD-SDI input and a downconverted SD-SDI output with superimposed time code

#### Applicable Models

MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)  
MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)



## Video Server and Disk Recorder Accessories

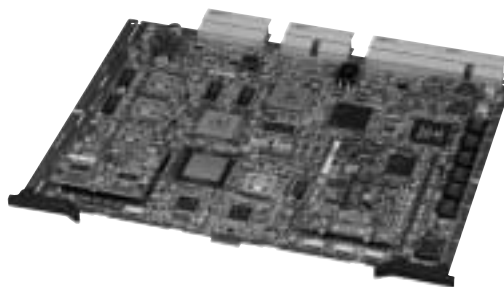
### BKMA-730 HDCAM Output Board

#### Features

- Provides two HD-SDI outputs and two downconverted SD-SDI outputs (one with superimposed time code)

#### Applicable Models

MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)  
MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)



### BKMA-750 Asynchronous Network Interface Kit

Used in conjunction with a PC configured as a gateway to make the MAV-777 Network capable

#### Features

- Used with the MAV-777 and a gateway PC, allows asynchronous file transfer via Gigabit Ethernet (GbE), 1000 Base-SX
- Requires the BZMA-757 Contents Manager software and a gateway PC
- Allows collaboration among edit suites
- File transfer at up to 5 times real time in any direction
- Up to 6 files can be transferred simultaneously
- Simultaneous playback of a file while receiving it is possible

#### Applicable Models

BZMA-757 Contents Manager  
MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)

#### Optional Software

BZMA-757 Contents Manager

### BKMA-PS70 Optional, Redundant PSU

#### Features

- An optional, redundant PSU (Power Supply Unit) for use with MAV-70/70XGI Transmission Server.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

## Video Server and Disk Recorder Accessories

### BKNE-1011 Editing Fader Panel

#### Features

- Allows control of the DNE-2000 audio mixer via hard keys
- Controls audio input and output levels and controls effects
- Includes master fader control
- Independent control of each audio track
- Transition lever to manually execute effect transitions
- Effect parameter control

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
 MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
 MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)



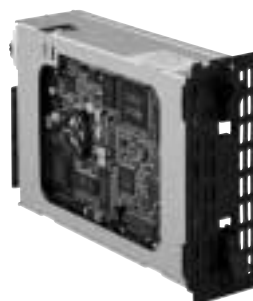
### BKSH-272G 73 GB HDD Unit

#### Features

- A hard disk drive unit with a storage capacity of 73 GB, designed to be used in the VSR-2000A.

#### Applicable Models

VSR-2000A Multi Access Video and Audio Server



### BKSR-2025 MPEG HD Encoder Board

#### Features

- Encodes HD video for the VSR-2000A. Provides an HD SDI input, a monitor out, and four AES/EBU audio inputs for the VSR-2000A.

#### Applicable Models

VSR-2000A Multi Access Video and Audio Server

## Video Server and Disk Recorder Accessories

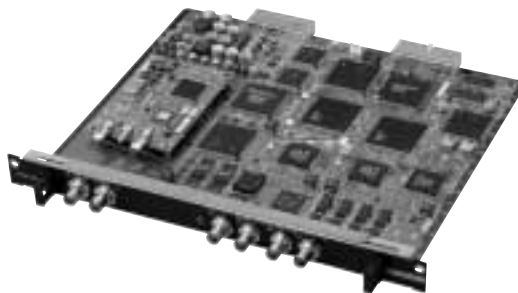
### BKSR-2035 MPEG HD Decoder Board

#### Features

- Decodes HD video for the VSR-2000A. Provides two HD SDI outputs, and four AES/EBU audio outputs for the VSR-2000A.

#### Applicable Models

VSR-2000A Multi Access Video and Audio Server



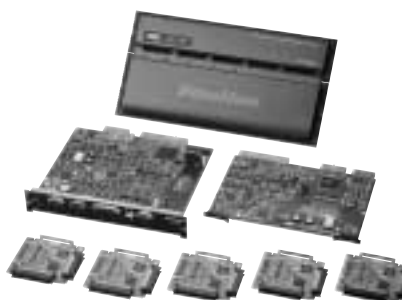
### BKSR-U2000 Upgrade Kit

#### Features

- Upgrade Kit for the VSR-2000. This kit upgrades a VSR-2000 to a VSR-2000A.

#### Applicable Models

VSR-2000A Multi Access Video and Audio Server



### BZA-820 Transmission Management Software

#### Features

- Transmission Management software for MAV-70/70XGI Transmission Server

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

### BZA-900 Multi-Channel Manager Software

#### Features

- Multi-Channel Manager Software for the MAV-70/70XGI Transmission Server.

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)  
MAV-70XGI Transmission Server (252 GB Model)

## Video Server and Disk Recorder Accessories

### BZAA-821 I/O Expansion Option Software

#### Features

- I/O expansion option software for MAV-70/70XGI

#### Transmission Server

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)

MAV-70XGI Transmission Server (252 GB Model)

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### BZAA-822 Time Shift Option Software

#### Features

- Time shift option software for MAV-70/70XGI

#### Transmission Server

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)

MAV-70XGI Transmission Server (252 GB Model)

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### BZAA-823 Copy Management Option Software

#### Features

- Copy management option software for MAV-70/70XGI

#### Transmission Server

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)

MAV-70XGI Transmission Server (252 GB Model)

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### BZMA-505 File browsing software for MAV-555

#### Features

- The BZMA-505 MAV File Browsing Software has been specially developed to browse the complete file list of a MAV-555 recorder via its Ethernet port. With this software, the following MAV-555 functions are controllable with a standard PC: ●File searching ●Remote control ●Self-diagnosis/Log extraction/Set up

## Video Server and Disk Recorder Accessories

### BZMA-757 Contents Manager

#### Features

- Offers an Explorer type GUI
- Allows viewing of complete file list including thumbnails
- Allows control of the disk recorder (play/record/etc.) and provides status information
- Can be used to transfer files from one MAV-777 or MAV-555A disk recorder to another by dragging and dropping from the file list
- The MAV-555A requires the BKMA-550 Asynchronous Network Interface Kit for file transfer via GbE.
- The MAV-777 requires the BKMA-750 Asynchronous Network Interface Kit for file transfer via GbE.

#### Applicable Models

BKMA-750 Asynchronous Network Interface Kit

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)

MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)

MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)

MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)

#### Supplied Accessories

Installation Manual (1)

Operation Manual (1)

#### Optional Accessories

BKMA-550 Asynchronous Network Board

BKMA-750 Asynchronous Network Interface Kit

### BZMA-E555 Contents Manager

#### Features

- Offers an Explorer type GUI
- Allows viewing of complete file list including thumbnails
- Allows control of the disk recorder (play/record/etc.) and provides status information
- Can be used to transfer files from one MAV-555A disk recorder to another by dragging and dropping from the file list
- Requires the BKMA-550 Asynchronous Interface Kit to transfer files via GbE

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)

MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)

MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)

#### Supplied Accessories

Installation Manual (1)

Operation Manual (1)

## Video Server and Disk Recorder Accessories

### MAVE-D555 Dial Panel

#### Features

- Dedicated desktop controller with a jog/shuttle dial
- Allows direct access to effect patterns ●Comes complete with a numeric keypad and and LCD display.

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
 MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
 MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)



### MAVE-F555 Editing Panel

#### Features

- Panel functions include file selection, search, and display, and can be used for cut insertion, deleting, and other non-linear editing functions ●Can be used to control external VTRs ●The MAVE-F555 can be used in conjunction with conventional Sony BVE Series of edit controllers for file selection.

#### Applicable Models

MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)  
 MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)  
 MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)  
 MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)



## Video Server and Disk Recorder Accessories

### MAV-EX70 I/O Extension Chassis

#### Features

- An I/O extension chassis for MAV-70/70XGI

#### Transmission Server

#### Applicable Models

MAV-70XGI Transmission Server (511 GB Model)

MAV-70XGI Transmission Server (252 GB Model)

### RMM-555 Rack Mounting Kit

#### Features

- 19-inch rack mount kit conforming to the EIA RS-310C standard
- Contains all the hardware necessary to rack-mount your video disk recorder including two slide rails and a pair of rack-mount ears

#### Applicable Models

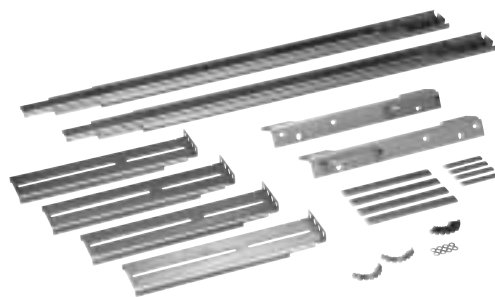
MAV-555A Sony Multi-Access Video Disk Recorder (10 hour recording model)

MAV-555A Sony Multi-Access Video Disk Recorder (20 hour recording model)

MAV-555SS Sony Multi-Access Video Disk Recorder (Super Motion Model)

MAV-777 Sony HD Multi-Access Video Disk Recorder (4 hour recording model)

MAV-777 Sony HD Multi-Access Video Disk Recorder (8 hour recording model)



# Tape Robotics

CSM-100BF..... 556  
CSM-100BS ..... 557  
CSM-200BF..... 558  
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CSM-200C..... 560  
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Tape Robotics

Tape Robotics

CSM-100BF PetaSite Basic Storage System FC-type

One of the three entry-level models for the PetaSite S Series tape libraries with FC-type SAIT-1 tape drives accommodated for data storage up to 140 TB (Compressed) or 54 TB (Uncompressed)

Features

- Maximum storage capacity of 140 TB (Compression factor 2.6 to 1) or 54TB (Uncompressed) with 108 cartridges in use when housing 4 SAIT-1 tape drives
- Accommodates up to 12 SAIT-1 format tape drives with fibre channel interface and 1 main server with library control function
- With two tape drives supplied as standard
- Hot swappable drive exchange
- Fully redundant design for the critical components
- Sony's HSM (Hierarchical Storage Management) software — "PetaServe" and backup software — "PetaBack" are pre-installed and configured with temporary licenses for users' convenience
- Includes hub and terminal server
- Standard 19-inch cabinet size
- Package design for flexible layout and easy installation
- For expansion, up to 7 additional units in any combination of Drive and/or Cartridge Consoles can be added to the basic storage system



Optional Accessories

- CSMA-BLTL PetaSite Extension Belt Kit
- CSMA-BLTS PetaSite Extension Belt Kit
- CSMA-CBLL PetaSite Extension Cable Kit
- CSMA-CBLS PetaSite Extension Cable Kit
- CSMA-DIF Redundant Drive Control Unit
- CSMA-PSD Redundant Power Unit for Drive
- CSMA-PSL PetaSite Redundant Power Unit

Optional Peripherals

- CSM-200C PetaSite Cartridge Console
- CSM-200D PetaSite Drive Console
- CSMA-DR100S PetaSite Storage Management System Drive Unit (SCSI-type)
- CSMA-DR130F PetaSite Storage Management System Drive Unit (FC-type)

Specifications

Specifications for CSM-100BF/-100BS (Basic Console)

General Specifications & Performance

Number of Drives & Storage Capacity (SAIT-1 format, uncompressed)

- 4 drives: 54 TB
- 8 drives: 54 TB
- 12 drives: 54 TB

Number of Drives & Tape Slots

- 4 drives: 108 slots
- 8 drives: 108 slots
- 12 drives: 108 slots

Scalability

Up to 7 additional drive and/or cartridge consoles

Cartridge Exchange Time

400 to 300 exchanges per hour (Average: 360 )

Cartridge Access Time

6 seconds (Average: 5 seconds )

Bar Code Reader

code39 Barcode Reader standard

IN/OUT Magazine Port

6-cartridge capacity x 2

Weight (Library only)

360 [kg]

771 [lb]

Dimensions W x H x D

1,980 x 680 x 950 (Up to 5440) [mm]

(6.50 x 2.23 x 3.11) (Up to 17.85) [ft]

Reliability

MTBF (Mean Time Before Failure)

300,000 hours

MCBF (Mean Cycles Before Failure)

2,000,000 cycles

MTTR (Mean Time To Repair)

Less than 30 minutes

Environmental Condition

Operating Temperature

5°C to 35°C

Storing Temperature

-20°C to 60°C

Operating Humidity

20% to 80% (Without condensation )

Power Requirements

Power Voltage

AC 100V/120V/220V/230V/240V

(Switching )

Power Frequency

50/60 Hz

Power Consumption

Less than 1010 VA (12 drives)

Tape Robotics

CSM-100BS PetaSite Basic Storage System SCSI-type

One of the three entry-level models for the PetaSite S Series tape libraries with SCSI-type SAIT-1 tape drives accommodated for data storage up to 140TB (Compressed) or 54TB (Uncompressed)

Features

- Maximum storage capacity of 140TB (Compression factor 2.6 to 1) or 54TB (Uncompressed) with 108 cartridges in use when housing 4 SAIT-1 tape drives
- Accommodates up to 12 SAIT-1 format tape drives with SCSI interface and 1 main server with library control function
- With two tape drives supplied as standard
- Hot swappable drive exchange
- Fully redundant design for the critical components
- Sony's HSM (Hierarchical Storage Management) software — "PetaServe" and backup software — "PetaBack" are pre-installed and configured with temporary licenses for users' convenience
- Includes hub and terminal server
- Standard 19-inch cabinet size
- Package design for flexible layout and easy installation
- For expansion, up to 7 additional units in any combination of Drive and/or Cartridge Consoles can be added to the basic storage system



Tape Robotics

Optional Accessories

- CSMA-BLTL PetaSite Extension Belt Kit
- CSMA-BLTS PetaSite Extension Belt Kit
- CSMA-CBLL PetaSite Extension Cable Kit
- CSMA-CBLS PetaSite Extension Cable Kit
- CSMA-DIF Redundant Drive Control Unit
- CSMA-PSD Redundant Power Unit for Drive
- CSMA-PSL PetaSite Redundant Power Unit

Optional Peripherals

- CSM-200C PetaSite Cartridge Console
- CSM-200D PetaSite Drive Console
- CSMA-DR100S PetaSite Storage Management System Drive Unit (SCSI-type)
- CSMA-DR130F PetaSite Storage Management System Drive Unit (FC-type)

Specifications

Specifications for CSM-100BF/-100BS (Basic Console)

General Specifications & Performance

Number of Drives & Storage Capacity (SAIT-1 format, uncompressed)

- 4 drives: 54 TB
- 8 drives: 54 TB
- 12 drives: 54 TB

Number of Drives & Tape Slots

- 4 drives: 108 slots
- 8 drives: 108 slots
- 12 drives: 108 slots

Scalability

Up to 7 additional drive and/or cartridge consoles

Cartridge Exchange Time

400 to 300 exchanges per hour (Average: 360 )

Cartridge Access Time

6 seconds (Average: 5 seconds )

Bar Code Reader

code39 Barcode Reader standard

IN/OUT Magazine Port

6-cartridge capacity x 2

Weight (Library only)

360 [kg]  
771 [lb]

Dimensions W x H x D

1,980 x 680 x 950 (Up to 5440) [mm]  
(6.50 x 2.23 x 3.11) (Up to 17.85) [ft]

Reliability

MTBF (Mean Time Before Failure)

300,000 hours

MCBF(Mean Cycles Before Failure)

2,000,000 cycles

MTTR(Mean Time To Repair)

Less than 30 minutes

Environmental Condition

Operating Temperature

5°C to 35°C

Storing Temperature

-20°C to 60°C

Operating Humidity

20% to 80% (Without condensation )

Power Requirements

Power Voltage

AC 100V/120V/220V/230V/240V  
(Switching )

Power Frequency

50/60 Hz

Power Consumption

Less than 1010 VA (12 drives)

Tape Robotics

CSM-200BF PetaSite Basic Storage System FC-type

One of the three entry-level models for the PetaSite S Series tape libraries with FC-type SAIT-1 tape drives accommodated for data storage up to 280TB (Compressed) or 108TB (Uncompressed).

Features

- Maximum storage capacity of 280 TB (Compression factor 2.6 to 1) or 108 TB (Uncompressed) with 216 cartridges in use when housing 4 SAIT-1 tape drives
- Accommodates up to 12 SAIT-1 format tape drives with fibre channel interface and 1 main server with library control function
- With two tape drives supplied as standard
- Hot swappable drive exchange
- Fully redundant design for the critical components
- Sony's HSM (Hierarchical Storage Management) software — "PetaServe" and backup software — "PetaBack" are pre-installed and configured with temporary licenses for users' convenience
- Includes hub and terminal server
- Standard 19-inch cabinet size
- Package design for flexible layout and easy installation
- For expansion, up to 7 additional units in any combination of Drive and/or Cartridge Consoles can be added to the basic storage system



Optional Accessories

- CSMA-BLTL PetaSite Extension Belt Kit
- CSMA-BLTS PetaSite Extension Belt Kit
- CSMA-CBLL PetaSite Extension Cable Kit
- CSMA-CBLS PetaSite Extension Cable Kit
- CSMA-DIF Redundant Drive Control Unit
- CSMA-PSD Redundant Power Unit for Drive
- CSMA-PSL PetaSite Redundant Power Unit

Optional Peripherals

- CSM-200C PetaSite Cartridge Console
- CSM-200D PetaSite Drive Console
- CSMA-DR100S PetaSite Storage Management System Drive Unit (SCSI-type)
- CSMA-DR130F PetaSite Storage Management System Drive Unit (FC-type)

Specifications

Specifications for CSM-200BF/-200BS (Basic Console)

General Specifications & Performance

Number of Drives & Storage Capacity (SAIT-1 format, uncompressed)

- 4 drives: 108 TB
- 8 drives: 102 TB
- 12 drives: 96 TB

Number of Drives & Tape Slots

- 4 drives: 216 slots
- 8 drives: 204 slots
- 12 drives: 192 slots

Scalability

Up to 7 additional drive and/or cartridge consoles

Cartridge Exchange Time

400 to 300 exchanges per hour (Average: 360 )

Cartridge Access Time

6 seconds (Average: 5 seconds )

Bar Code Reader

code39 Barcode Reader standard

IN/OUT Magazine Port

6-cartridge capacity x 2

Weight (Library only)

- 360 [kg]
- 771 [lb]

Dimensions W x H x D

- 1,980 x 680 x 950 (Up to 5440) [mm]
- (6.50 x 2.23 x 3.11) (Up to 17.85) [ft]

Reliability

MTBF (Mean Time Before Failure)

300,000 hours

MCBF (Mean Cycles Before Failure)

2,000,000 cycles

MTTR (Mean Time To Repair)

Less than 30 minutes

Environmental Condition

Operating Temperature

5°C to 35°C

Storing Temperature

-20°C to 60°C

Operating Humidity

20% to 80% (Without condensation )

Power Requirements

Power Voltage

AC 100V/120V/220V/230V/240V (Switching )

Power Frequency

50/60 Hz

Power Consumption

Less than 1010 VA (12 drives)

Tape Robotics

CSM-200BS PetaSite Basic Storage System SCSI-type

One of the three entry-level models for the PetaSite S Series tape libraries with SCSI-type SAIT-1 tape drives accommodated for data storage up to 280 TB (Compressed) or 108 TB (Uncompressed).

Features

- Maximum storage capacity of 280TB (Average compression ratio of 2.6:1) or 108TB (Uncompressed) with 216 cartridges in use when housing 4 SAIT-1 tape drives
- Accommodates up to 12 SAIT-1 format tape drives with SCSI interface and 1 main server with library control function
- With two tape drives supplied as standard
- Hot swappable drive exchange
- Fully redundant design for the critical components
- Sony's HSM (Hierarchical Storage Management) software — "PetaServe" and backup software — "PetaBack" are pre-installed and configured with temporary licenses for users' convenience
- Includes hub and terminal server
- Standard 19-inch cabinet size
- Package design for flexible layout and easy installation
- For expansion, up to 7 additional units in any combination of drive and/or cartridge consoles can be added to the basic storage system



Tape Robotics

Optional Accessories

- CSMA-BLTL PetaSite Extension Belt Kit
- CSMA-BLTS PetaSite Extension Belt Kit
- CSMA-CBLL PetaSite Extension Cable Kit
- CSMA-CBLS PetaSite Extension Cable Kit
- CSMA-DIF Redundant Drive Control Unit
- CSMA-PSD Redundant Power Unit for Drive
- CSMA-PSL PetaSite Redundant Power Unit

Optional Peripherals

- CSM-200C PetaSite Cartridge Console
- CSM-200D PetaSite Drive Console
- CSMA-DR100S PetaSite Storage Management System Drive Unit (SCSI-type)
- CSMA-DR130F PetaSite Storage Management System Drive Unit (FC-type)

Specifications

Specifications for CSM-200BF/-200BS (Basic Console)

General Specifications & Performance

Number of Drives & Storage Capacity (SAIT-1 format, uncompressed)

- 4 drives: 108 TB
- 8 drives: 102 TB
- 12 drives: 96 TB

Number of Drives & Tape Slots

- 4 drives: 216 slots
- 8 drives: 204 slots
- 12 drives: 192 slots

Scalability

Up to 7 additional drive and/or cartridge consoles

Cartridge Exchange Time

400 to 300 exchanges per hour (Average: 360)

Cartridge Access Time

6 seconds (Average: 5 seconds)

Bar Code Reader

code39 Barcode Reader standard

IN/OUT Magazine Port

6-cartridge capacity x 2

Weight (Library only)

360 [kg]  
771 [lb]

Dimensions W x H x D

1,980 x 680 x 950 (Up to 5440) [mm]  
(6.50 x 2.23 x 3.11) (Up to 17.85) [ft]

Reliability

MTBF (Mean Time Before Failure)

300,000 hours

MCBF (Mean Cycles Before Failure)

2,000,000 cycles

MTTR (Mean Time To Repair)

Less than 30 minutes

Environmental Condition

Operating Temperature

5°C to 35°C

Storing Temperature

-20°C to 60°C

Operating Humidity

20% to 80% (Without condensation)

Power Requirements

Power Voltage

AC 100V/120V/220V/230V/240V  
(Switching)

Power Frequency

50/60 Hz

Power Consumption

Less than 1010 VA (12 drives)

## Tape Robotics

### CSM-200C PetaSite Cartridge Console

Cartridge expansion console for the PetaSite S Series Tape Libraries

#### Features

- Cartridge console for capacity expansion
- Accommodates up to 396 cartridges per one console with the maximum storage capacity of 516 TB (Average compression ratio of 2.6:1) or 198 TB (uncompressed)
- Up to 7 units in any combination of cartridge or drive console(s) can be added to the basic storage system

#### Applicable Models

CSM-100BF PetaSite Basic Storage System  
FC-type  
CSM-100BS PetaSite Basic Storage System  
SCSI-type  
CSM-200BF PetaSite Basic Storage System  
FC-type  
CSM-200BS PetaSite Basic Storage System  
SCSI-type  
CSM-60BF PetaSite Basic Storage System  
FC-type  
CSM-60BS PetaSite Basic Storage System  
SCSI-type



Tape Robotics

### CSM-200D PetaSite Drive Console

Tape drive and cartridge expansion console for the PetaSite S Series Tape Libraries

#### Features

- Drive console for tape drive and cartridge expansion
- Accommodates up to 12 S-AIT tape drives per one console
- Maximum storage capacity of 454 TB (compression factor 2.6 to 1) or 174 TB (uncompressed) with 348 SAIT-1 cartridges in use when housing 4 SAIT-1 tape drives
- Up to 7 units in any combination of cartridge or drive consoles can be added to the basic storage system

#### Applicable Models

CSM-100BF PetaSite Basic Storage System  
FC-type  
CSM-100BS PetaSite Basic Storage System  
SCSI-type  
CSM-200BF PetaSite Basic Storage System  
FC-type  
CSM-200BS PetaSite Basic Storage System  
SCSI-type  
CSM-60BF PetaSite Basic Storage System  
FC-type  
CSM-60BS PetaSite Basic Storage System  
SCSI-type



Tape Robotics

CSM-60BF PetaSite Basic Storage System FC-type

One of the three entry-level models for the PetaSite S Series tape libraries with FC-type SAIT-1 tape drives accommodated for data storage up to 78 TB (Compressed) or 30 TB (Uncompressed)

Features

- Maximum storage capacity of 78 TB (Compression factor 2.6 to 1) or 30 TB (Uncompressed) with 60 cartridges in use when housing 4 SAIT-1 tape drives
- Accommodates up to 12 SAIT-1 format tape drives with fibre channel interface and 1 main server with library control function
- With two tape drives supplied as standard
- Hot swappable drive exchange
- Fully redundant design for the critical components
- Sony's HSM (Hierarchical Storage Management) software — "PetaServe" and backup software — "PetaBack" are pre-installed and configured with temporary licenses for users' convenience
- Includes hub and terminal server
- Standard 19-inch cabinet size
- Package design for flexible layout and easy installation
- For expansion, up to 7 additional units in any combination of Drive and/or Cartridge Consoles can be added to the basic storage system



Tape Robotics

Optional Accessories

- CSMA-BLTL PetaSite Extension Belt Kit
- CSMA-BLTS PetaSite Extension Belt Kit
- CSMA-CBLL PetaSite Extension Cable Kit
- CSMA-CBLS PetaSite Extension Cable Kit
- CSMA-DIF Redundant Drive Control Unit
- CSMA-PSD Redundant Power Unit for Drive
- CSMA-PSL PetaSite Redundant Power Unit

Optional Peripherals

- CSM-200C PetaSite Cartridge Console
- CSM-200D PetaSite Drive Console
- CSMA-DR100S PetaSite Storage Management System Drive Unit (SCSI-type)
- CSMA-DR130F PetaSite Storage Management System Drive Unit (FC-type)

Specifications

Specifications for CSM-60BF/-60BS (Basic Console)

General Specifications & Performance

Number of Drives & Storage Capacity (SAIT-1 format, uncompressed)

- 4 drives: 30 TB
- 8 drives: 30 TB
- 12 drives: 30 TB

Number of Drives & Tape Slots

- 4 drives: 60 slots
- 8 drives: 60 slots
- 12 drives: 60 slots

Scalability

Up to 7 additional drive and/or cartridge consoles

Cartridge Exchange Time

400 to 300 exchanges per hour (Average: 360)

Cartridge Access Time

6 seconds (Average: 5 seconds)

Bar Code Reader

code39 Barcode Reader standard

IN/OUT Magazine Port

6-cartridge capacity x 2

Weight (Library only)

360 [kg]  
771 [lb]

Dimensions W x H x D

1,980 x 680 x 930 (Up to 5440) [mm]  
(6.50 x 2.23 x 3.11) (Up to 17.85) [ft]

Reliability

MTBF (Mean Time Before Failure)

300,000 hours

MCBF (Mean Cycles Before Failure)

2,000,000 cycles

MTTR (Mean Time To Repair)

Less than 30 minutes

Environmental Condition

Operating Temperature

5°C to 35°C

Storing Temperature

-20°C to 60°C

Operating Humidity

20% to 80% (Without condensation)

Power Requirements

Power Voltage

AC 100V/120V/220V/230V/240V  
(Switching)

Power Frequency

50/60 Hz

Power Consumption

Less than 1010 VA (12 drives)

## Tape Robotics

# CSM-60BS PetaSite Basic Storage System SCSI-type

One of the three entry-level models for the PetaSite S Series tape libraries with SCSI-type SAIT-1 tape drives accommodated for data storage up to 78 TB (Compressed) or 30 TB (Uncompressed)

### Features

- Maximum storage capacity of 78 TB (Compression factor 2.6 to 1) or 30 TB (Uncompressed) with 60 cartridges in use when housing 4 SAIT-1 tape drives
- Accommodates up to 12 SAIT-1 format tape drives with SCSI interface and 1 main server with library control function
- With two tape drives supplied as standard
- Hot swappable drive exchange
- Fully redundant design for the critical components
- Sony's HSM (Hierarchical Storage Management) software — "PetaServe" and backup software — "PetaBack" are pre-installed and configured with temporary licenses for users' convenience
- Includes hub and terminal server
- Standard 19-inch cabinet size
- Package design for flexible layout and easy installation
- For expansion, up to 7 additional units in any combination of Drive and/or Cartridge Consoles can be added to the basic storage system



Tape Robotics

### Optional Accessories

CSMA-BLTL PetaSite Extension Belt Kit  
 CSMA-BLTS PetaSite Extension Belt Kit  
 CSMA-CBLL PetaSite Extension Cable Kit  
 CSMA-CBLS PetaSite Extension Cable Kit  
 CSMA-DIF Redundant Drive Control Unit  
 CSMA-PSD Redundant Power Unit for Drive  
 CSMA-PSL PetaSite Redundant Power Unit

### Optional Peripherals

CSM-200C PetaSite Cartridge Console  
 CSM-200D PetaSite Drive Console  
 CSMA-DR100S PetaSite Storage Management System Drive Unit (SCSI-type)  
 CSMA-DR130F PetaSite Storage Management System Drive Unit (FC-type)

### Specifications

Specifications for CSM-60BF/-60BS (Basic Console)

#### General Specifications & Performance

Number of Drives & Storage Capacity  
 (SAIT-1 format, uncompressed)  
 4 drives: 30 TB  
 8 drives: 30 TB  
 12 drives: 30 TB

#### Number of Drives & Tape Slots

4 drives: 60 slots  
 8 drives: 60 slots  
 12 drives: 60 slots

#### Scalability

Up to 7 additional drive and/or cartridge consoles

#### Cartridge Exchange Time

400 to 300 exchanges per hour  
 (Average: 360)

#### Cartridge Access Time

6 seconds (Average: 5 seconds)

#### Bar Code Reader

code39 Barcode Reader standard

#### IN/OUT Magazine Port

6-cartridge capacity x 2

#### Weight (Library only)

360 [kg]  
 771 [lb]

#### Dimensions W x H x D

1,980 x 680 x 950 (Up to 5440) [mm]  
 (6.50 x 2.23 x 3.11) (Up to 17.85) [ft]

#### Reliability

MTBF (Mean Time Before Failure)

300,000 hours

MCBF (Mean Cycles Before Failure)

2,000,000 cycles

MTTR (Mean Time To Repair)

Less than 30 minutes

#### Environmental Condition

Operating Temperature

5°C to 35°C

Storing Temperature

-20°C to 60°C

Operating Humidity

20% to 80% (Without condensation)

#### Power Requirements

Power Voltage

AC 100V/120V/220V/230V/240V  
 (Switching)

Power Frequency

50/60 Hz

Power Consumption

Less than 1010 VA (12 drives)

## Tape Robotics

### CSMA-BLTL PetaSite Extension Belt Kit

#### Features

- Extension belt kit for connection between the 4th, 5th, 6th, and/or 7th additional console(s)

#### Applicable Models

CSM-100BF PetaSite Basic Storage System  
FC-type  
CSM-100BS PetaSite Basic Storage System  
SCSI-type  
CSM-200BF PetaSite Basic Storage System  
FC-type  
CSM-200BS PetaSite Basic Storage System  
SCSI-type

CSM-60BF PetaSite Basic Storage System  
FC-type  
CSM-60BS PetaSite Basic Storage System  
SCSI-type

### CSMA-BLTS PetaSite Extension Belt Kit

#### Features

- Extension belt kit for connection between the 1st, 2nd, and/or 3rd additional console(s)

#### Applicable Models

CSM-100BF PetaSite Basic Storage System  
FC-type  
CSM-100BS PetaSite Basic Storage System  
SCSI-type  
CSM-200BF PetaSite Basic Storage System  
FC-type  
CSM-200BS PetaSite Basic Storage System  
SCSI-type

CSM-60BF PetaSite Basic Storage System  
FC-type  
CSM-60BS PetaSite Basic Storage System  
SCSI-type

### CSMA-CBLL PetaSite Extension Cable Kit

#### Features

- Extension cable kit for connection between the 4th, 5th, 6th, and/or 7th additional console(s)

#### Applicable Models

CSM-100BF PetaSite Basic Storage System  
FC-type  
CSM-100BS PetaSite Basic Storage System  
SCSI-type  
CSM-200BF PetaSite Basic Storage System  
FC-type  
CSM-200BS PetaSite Basic Storage System  
SCSI-type

CSM-60BF PetaSite Basic Storage System  
FC-type  
CSM-60BS PetaSite Basic Storage System  
SCSI-type

### CSMA-CBLS PetaSite Extension Cable Kit

#### Features

- Extension cable kit for connection between the 2nd and/or 3rd additional console(s)

#### Applicable Models

CSM-100BF PetaSite Basic Storage System  
FC-type  
CSM-100BS PetaSite Basic Storage System  
SCSI-type  
CSM-200BF PetaSite Basic Storage System  
FC-type  
CSM-200BS PetaSite Basic Storage System  
SCSI-type

CSM-60BF PetaSite Basic Storage System  
FC-type  
CSM-60BS PetaSite Basic Storage System  
SCSI-type

Tape Robotics

CSMA-DIF Redundant Drive Control Unit

Features

●Redundant drive interface board kit for S-AIT format  
tape drive units such as CSMA-DR100S and  
CSMA-DR130F.

Applicable Models

CSM-100BF PetaSite Basic Storage System FC-type	CSM-200BS PetaSite Basic Storage System SCSI-type
CSM-100BS PetaSite Basic Storage System SCSI-type	CSM-60BF PetaSite Basic Storage System FC-type
CSM-200BF PetaSite Basic Storage System FC-type	CSM-60BS PetaSite Basic Storage System SCSI-type



Tape Robotics

Tape Robotics

CSMA-DR100S PetaSite Storage Management System Drive Unit (SCSI-type)

Features

●Single-reel half-inch SAIT-1 format tape drive unit with SCSI interface for tape library use ●Extremely high-density storage on cartridge by using the proven helical scanning method and the AME tape ●Large storage capacity of 1.3 TB (Compression factor 2.6 to 1) or 0.5 TB (Formatted, uncompressed) per one cartridge ●Fast sustained data transfer rate of up to 30 MB/s (Uncompressed) ●No need for periodical head cleaning by adopting the AME tape (Evaporated type) with no use of binder for adhering the magnetic particles ●Hot swappable for service and maintenance convenience ●Robust mechanical design to meet severe requirement for enterprise-class tape library applications ●Mounting kit supplied

Applicable Models

CSM-100BF PetaSite Basic Storage System FC-type  
CSM-100BS PetaSite Basic Storage System SCSI-type  
CSM-200BF PetaSite Basic Storage System FC-type  
CSM-200BS PetaSite Basic Storage System SCSI-type  
CSM-60BF PetaSite Basic Storage System FC-type  
CSM-60BS PetaSite Basic Storage System SCSI-type

Specifications

General

Power requirements  
DC 5 V ±5%, DC 12 V ±10%  
Power consumption  
28 VA (typical)  
Operating temperature  
5°C to 40°C (41°F to 104°F)  
Storage temperature  
-40°C to 70°C (-40°F to 158°F)  
Maximum wet bulb temperature  
26°C (78.8°F)  
Operating humidity  
20% to 80% RH non-condensing  
Dimensions (w x h x d)  
146 x 82.55 x 300 mm  
(5 3/4 x 3 3/8 x 11 7/8 inches)  
Mass  
3.6 kg (7 lb. 15 oz.)  
Media  
S-AIT media — 600 m AME, half-inch width  
tape, 1 reel cartridge, R-MIC  
S-AIT cleaning cartridge

Performance

Interface  
Ultra 160 Wide SCSI  
Data compression  
Adaptive Lossless Data Compression ALDC)  
Capacity  
0.5 TB (Uncompressed)  
1.3 TB (Average compression ratio of 2.6:1)  
Sustained transfer rate  
30 MB/s (Uncompressed)  
Burst transfer rate  
Asynchronous: 12 MB/s maximum  
Synchronous: 160 MB/s maximum  
Areal density  
720 Mbit/square inches  
Recording block length  
Variable or fixed

Average media load time  
23 seconds (with MIC)  
Average access time  
70 seconds  
Search speed  
157 inches/s maximum  
Rewind speed  
551 inches /s maximum  
Drum rotational speed  
5000 rpm  
Buffer size  
72 MB  
Uncorrectable error rate  
Less than 10-17 bits  
MTBF\*  
500,000 hours (100% duty cycle)  
Average R/W head life\*  
50,000 tape contact hours  
Average media uses\*  
30,000 end-to-end passes  
Memory-in-cassette (MIC)  
Non volatile remote memory in cassette (R-MIC) chip provides quick medal loads and allows fast searches to data. R-MIC chip contains tape's system log, search map and user-definable information, allowing the drive to advance at high speed directly to any file on the tape.  
Vibration (operating)  
0.25 G peak, sine wave of 5 to 500 Hz (swept)  
Shock (operating)  
5.0 G peak, half sine wave of 3 ms duration  
Head composition  
Hyper Metal Trimmed Construction (write), New Super Laminate Head (read)  
Encoding system  
Trellis Coded Partial Response (TCPR)  
Track pitch  
5.50 um  
Altitude  
10,000 feet

\*: MTBF, head life and media use specifications are averages based on normal office environmental conditions. Actual experience may vary.

Tape Robotics

CSMA-DR130F PetaSite Storage Management System Drive Unit  
(FC-type)

Features

●Single-reel half-inch SAIT-1 format tape drive unit designed for use with Fibre Channel interface for tape library use ●Extremely high-density storage on cartridge by using the proven helical scanning method and the AME tape ●Large storage capacity of 1.3 TB (Average compression ratio of 2.6 : 1) or 0.5 TB (Formatted, uncompressed) per one cartridge ●Fast sustained data transfer rate of up to 30 MB/s (Uncompressed) ●No need for periodical head cleaning by adopting the AME tape (Evaporated type) with no use of binder for adhering the magnetic particles ●Hot swappable for service and maintenance convenience ●Robust mechanical design to meet severe requirement for enterprise-class tape library applications ●Mounting kit supplied

Applicable Models

CSM-100BF PetaSite Basic Storage System FC-type  
CSM-100BS PetaSite Basic Storage System  
SCSI-type  
CSM-200BF PetaSite Basic Storage System FC-type  
CSM-200BS PetaSite Basic Storage System  
SCSI-type  
CSM-60BF PetaSite Basic Storage System FC-type  
CSM-60BS PetaSite Basic Storage System  
SCSI-type

Specifications

General

Power requirements  
DC 5 V  $\pm$ 5%, DC 12 V  $\pm$ 10%  
Power consumption  
28 VA (typical)  
Operating temperature  
5°C to 40°C (41°F to 104°F)  
Storage temperature  
-40°C to 70°C (-40°F to 158°F)  
Maximum wet bulb temperature  
26°C (78.8°F)  
Operating humidity  
20% to 80% RH non-condensing  
Dimensions (w x h x d)  
146 x 82.55 x 300 mm  
(5 3/4 x 3 3/8 x 11 7/8 inches)  
Mass  
3.6 kg (7 lb. 15 oz.)  
Media  
S-AIT media — 600 m AME, half-inch width  
tape, 1 reel cartridge, R-MIC  
S-AIT cleaning cartridge

Performance

Interface  
Fibre Channel  
Data compression  
Adaptive Lossless Data Compression ALDC)  
Capacity  
0.5 TB (Uncompressed)  
1.3 TB (Compression factor 2.6 to 1)  
Sustained transfer rate  
30 MB/s (Uncompressed)  
Burst transfer rate  
Asynchronous: 12 MB/s maximum  
Synchronous: 160 MB/s maximum  
Areal density  
720 Mbit/square inches  
Recording block length  
Variable or fixed

Average media load time  
23 seconds (with MIC)  
Average access time  
70 seconds  
Search speed  
157 inches/s maximum  
Rewind speed  
551 inches /s maximum  
Drum rotational speed  
5000 rpm  
Buffer size  
72 MB  
Uncorrectable error rate  
Less than 10-17 bits  
MTBF\*  
500,000 hours (100% duty cycle)  
Average R/W head life\*  
50,000 tape contact hours  
Average media uses\*  
30,000 end-to-end passes  
Memory-in-cassette (MIC)  
Non volatile remote memory in cassette  
(R-MIC) chip provides quick medal  
loads and allows fast searches to data.  
R-MIC chip contains tape's system  
log, search map and user-definable  
information, allowing the drive to advance  
at high speed directly to any file on the tape.  
Vibration (operating)  
0.25 G peak, sine wave of 5 to 500 Hz  
(swept)  
Shock (operating)  
5.0 G peak, half sine wave of 3 ms duration  
Head composition  
Hyper Metal Trimmed Construction (write),  
New Super Laminate Head (read)  
Encoding system  
Trellis Coded Partial Response (TCPR)  
Track pitch  
5.50  $\mu$ m  
Altitude  
10,000 feet

\*: MTBF, head life and media use specifications are averages based on normal office environmental conditions. Actual experience may vary.

Tape Robotics

CSMA-PSD Redundant Power Unit for Drive

Features

●Hot swappable redundant power unit dedicated to S-AIT  
format tape drive units such as CSMA-DR100S and  
CSMA-DR130F

Applicable Models	CSM-200BS PetaSite Basic Storage System
CSM-100BF PetaSite Basic Storage System	SCSI-type
FC-type	CSM-60BF PetaSite Basic Storage System
CSM-100BS PetaSite Basic Storage System	FC-type
SCSI-type	CSM-60BS PetaSite Basic Storage System
CSM-200BF PetaSite Basic Storage System	SCSI-type
FC-type	

CSMA-PSL PetaSite Redundant Power Unit

Features

●Hot swappable redundant power unit dedicated to the  
PetaSite S Series tape libraries

Applicable Models	CSM-60BF PetaSite Basic Storage System
CSM-100BF PetaSite Basic Storage System	FC-type
FC-type	CSM-60BS PetaSite Basic Storage System
CSM-100BS PetaSite Basic Storage System	SCSI-type
SCSI-type	
CSM-200BF PetaSite Basic Storage System	
FC-type	
CSM-200BS PetaSite Basic Storage System	
SCSI-type	

Tape Robotics



Tape Robotics

Software Products

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## Software Products

### BZA-7000 BZA-7000 Series Archive Solutions

#### Features

●BZA - 7000 Sony Archive Systems offer a carefully designed blend of storage, compression, database and networking technologies implemented under a highly customizable user environment. The system utilizes an Oracle™ database engine providing an advanced multimedia database system optimized for use in the Television and Multimedia industries. A hierarchical approach is taken to material management, storage and retrieval. The system may be used with simple shelf media storage through to a variety of automated mass storage systems using high performance data tape media. Via a powerful search engine, queries may be made from any networked research client providing video keyframe and textural search results that may be supplemented by low resolution browse pictures. Once the desired material has been identified, broadcast quality video and audio may be retrieved from a mass storage system. The resulting system is a high quality archive solution that may be searched instantly on a text and keyword basis and/or browsed at low resolution, while retrieval of broadcast quality material from a mass storage system can be achieved in minutes. Thus, the Sony Archive System is a practical and powerful on line media repository for the TV and multimedia production center.

### DZC-PSC2 PetaSite Control Software

#### Features

●Tape library control software for PetaSite-S Series

## Software Products

### FZC-HSME PetaServe Software Standard Pack (E)

#### Features

- A packaged product to run PetaServe software on a library and drives supported by FZC-LBE Basic Library License (E) for AIT library or stand-alone AIT/DTFdrive
- Supports MFS clients up to 100 GB as standard
- Product configuration: Install media (both PetaServe and PetaBack on a CD-ROM); Operation manual in PDF format on the CD-ROM; FZC-ST1 (License certificate and application form); FZC-LBE (License certificate and application form); FZC-MCDS1TB (License certificate and application form); FZC-PBK5 (License certificate and application form); License binder
- By using PetaServe Ver.3.00, further to monitoring, general operations including change of settings can be carried out through Java-based GUIs. Therefore, any host that can communicate with PetaServe server host over network can administer PetaServe system remotely through a Web browser with Java Plug-in function
- Operating systems supported: Solaris 2.5.1, Solaris 2.6, Solaris 7, and Solaris 8
- The FZC-LBE supports Sony LIB-302 AIT library, Qualstar TLS-4210 AIT library, Sony SDX-400C/300C AIT-1 drive, Sony LIB-162 AIT-2 library (Up to 32 slots with 4 drives), and Sony SDX-500C AIT-2 drive



### FZC-HSML PetaServe Software Standard Pack (L)

#### Features

- A packaged product to run PetaServe software on a library and drives supported by FZC-LBL Basic Library License (L) for large-sized library system
- Supports MFS clients up to 1 TB as standard
- Product configuration: Install media (both PetaServe and PetaBack on a CD-ROM); Operation manual in PDF format on the CD-ROM; FZC-ST1 (License certificate and application form); FZC-LBL (License certificate and application form); FZC-MCDS1TB (License certificate and application form); FZC-PBK5 (License certificate and application form); License binder
- By using PetaServe, further to monitoring, general operations including change of settings can be carried out through Java-based GUIs. Therefore, any host that can communicate with PetaServe server host over network can administer PetaServe system remotely through a Web browser with Java Plug-in function
- Operating systems supported: Solaris 2.5.1, Solaris 2.6, Solaris 7, and Solaris 8
- The FZC-LBL supports Sony CSM-200 Series systems



## Software Products

### FZC-HSMM PetaServe Software Standard Pack (M)

#### Features

- A packaged product to run PetaServe software on a library and drives supported by FZC-LBM Basic Library License (M) for mid-sized library system
- Supports MFS clients up to 1 TB as standard
- Product configuration: Install media (both PetaServe and PetaBack on a CD-ROM); Operation manual in PDF format on the CD-ROM; FZC-ST1 (License certificate and application form); FZC-LBM (License certificate and application form); FZC-MCDS1TB (License certificate and application form); FZC-PBK5 (License certificate and application form); License binder
- By using PetaServe, further to monitoring, general operations including change of settings can be carried out through Java-based GUIs. Therefore, any host that can communicate with PetaServe server host over network can administer PetaServe system remotely through a Web browser with Java Plug-in function
- Operating systems supported: Solaris 2.5.1, Solaris 2.6, Solaris 7, and Solaris 8
- The FZC-LBM supports Sony CSM-100 Series systems



### FZC-LBE Basic Library License (E)

#### Features

- Entry-level library license
- Supports AIT library with up to 4 tape drives and 32 slots
- Extension license for LIB-162 (AIT library)
- FZC-LBE supports Sony LIB-302 AIT library, Qualstar TLS-4210 AIT library, Sony SDX-400C/300C AIT-1 drive, Sony LIB-162 AIT-2 library (Up to 32 slots with 4 drives), Sony SDX-500C AIT-2 drive, Sony GY-10/2120 DTF drive, and Sony GY-8240 DTF-2 drive
- Product configuration: license certificate and license application form
- For system extension: (Case 1) For the LIB-162, expansion in 32-slot increments with one FZC-LBE; (Case 2) For the libraries other than those supported by FZC-LBE, purchase FZC-LBM/LBL/LBX1/LBX2 accordingly.

## Software Products

# FZC-MCDS5TB Migration Client Software License

### Features

- Client license for PetaServe
- Supports MFS clients up to 5 TB as standard
- Supports DDA function as standard
- Product configuration: License certificate and application form
- Operating systems supported: Solaris 2.5.1, Solaris 2.6, Solaris 7, and Solaris 8.

## MXF-10 Hyper Agent Software

Installed on a standard server, the MXF-10 Hyper Agent software converts various types of A/V data into the MXF format and transfers the file to designated destination devices via standard networks. The MXF-10 Software can handle various formats of audio and video and adds the ability to convert the video format bit rate as required, for effective transfer within the given network bandwidth. The MXF-10 also provides versatile software options to support the native file formats of Sony Multi-Access Video Disk Recorders (MAV) as well as baseband SDI signals.

### Features

- MXF Format Support
- Media Exchange Management\*
- Media Exchange by Drag-and-drop Function
- Partial Retrieve
- Multi-format Support
- Simultaneous Multi-access and Format Conversion
- System Scalability

### Optional Software

MXFA-100 Hyper Agent Filter Software  
MXFA-101 Hyper Agent Filter Software  
MXFA-102 Hyper Agent Filter Software  
MXFA-103 Hyper Agent Filter Software

## MXFA-100 Hyper Agent Filter Software

Installed in a standard server running the Hyper Agent MXF-10 software, the MXFA-100 Hyper Agent Filter 555A software can convert the native file format of the MAV-555A Sony Multi-Access Video Recorder into the MXF format.

### Applicable Models

MXF-10 Hyper Agent Software

## Software Products

### MXFA-101 Hyper Agent Filter Software

Installed in a standard server running the Hyper Agent MXF-10 software, the MXFA-101 Hyper Agent Filter 70XGI software can convert the native file format of the MAV-70XGI Sony Multi-Access Video and Audio Server into the MXF format.

Applicable Models  
MXF-10 Hyper Agent Software

### MXFA-102 Hyper Agent Filter Software

Installed in a standard server running the Hyper Agent MXF-10 software, the MXFA-102 Hyper Agent Filter 2000 software can convert the native file format of the MAV-2000 Sony Multi-Access Video and Audio Server into the MXF format.

Applicable Models  
MXF-10 Hyper Agent Software

### MXFA-103 Hyper Agent Filter Software

Installed in a standard server running the MXF-10 Hyper Agent software, the MXFA-103 Hyper Agent Filter SDI can encode SDI baseband signals into MPEG IMX formatted signals that can be further converted into the MXF format by the MXF-10 software.

Applicable Models  
MXF-10 Hyper Agent Software

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## Monitors

# BVM-F24A CineAlta Color Video Monitor

### Features

●24-inch\* CineAlta color video monitor ●Supports various formats signals: 1080/24P, 24PsF; 1080/25P, 25PsF; 1080/50i, 60i (Alternate scan display. Frame rate is also compatible with 1/1.001.); 1080/50P, 60P etc. ●Built in HD-SDI decoder and frame converter for HD-SDI input to eliminate flicker ●Dual link HD-SDI inputs: 1080/24P (4:4:4), 1080/60i (4:4:4), 1080/60P (4:2:2) etc. ●SXGA Format Signal Support (frame rate: 75 Hz and 85 Hz) ●Equipped with various area makers supported the film aspect ratios ●16:9 aspect ratio Flat surface HR Trinitron CRT ●Resolution: 1000TV lines ●Phosphor: SMTPE-C\*On Screen Menu for adjustment and operation\*Auto white balance function\*Built-in various circuits of Beam landing, Digital uniformity and Digital convergence\*Separate control unit (BKM-10R/11R)\*Setup and adjustment with Memory card\*Built-in test signal generator for crosshatch, 100% white signal, 20% gray signal, gray scale, and PLUGE (Picture Line Up Generating Equipment)\*Pulse cross function for simultaneous checking of the horizontal and vertical synchronization signals

\*24-inch or 23-inch viewable area, measured diagonally.



### Optional Accessories

BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-12Y Memory Card  
BKM-34H Control Unit Attachment Kit  
BKM-14L Auto Setup Probe

### Specifications

#### General

Signal format:

54 kHz to 91.1 kHz

Type:

Display unit

Power requirements:

100 to 240 V AC  $\pm 10\%$ , 50/60 Hz

Power consumption:

225 W

Dimensions\*1:

565.5 (W) x 436.8 (H) x 609.3 (D) mm  
(22 3/8 x 17 1/4 x 24 1/8 inches)

Mass:

Approx. 54 kg (119 lb 1 oz)

CRT

CRT type:

24-inch HR Trinitron

AG pitch:

0.25 mm to 0.28 mm, 90° deflection,  $\phi 29.1$  mm in-line gun

Phosphor:

EBU

Effective picture size

16:9: 482.1 (W) x 271.2 (H) mm, 553.1 mm (diagonal) (19 x 10 3/4 inches, 21 7/8 inches)  
4:3: 361.6 (W) x 271.2 (H) mm, 452 mm (diagonal) (14 1/4 x 10 3/4 inches, 17 7/8 inches)

#### Inputs/outputs

Video:

RGB:

BNC type x3 (75  $\Omega$ ), 0.7 Vp-p (1 Vp-p, Sync on Green) +3 dB/-6 dB, sync positive

HD-SDI (\*Single link (4:2:2), Dual link (4:2:2),

Dual link (4:4:4):

BNC type x 2 (75  $\Omega$ ) with monitor out, 1.485 Gbps (Data rate), 75  $\Omega$  unbalance (Impedance), Single Link Mode (Line1 or Line2): 2 inputs, Dual Link Mode (Link A and Link B): 1 input, \*Delay time range between Link A and Link B: Within  $\pm 1/2$  H

External sync:

BNC type x 2 (75  $\Omega$ )

Composite:

0.3 to 5.0 Vp-p, positive/negative tri-level sync signal input or negative bi-level sync signal input

Separate HS/VS:

0.3 to 5.0 Vp-p, positive sync/negative sync (Auto Selection)

Remote

Option:

RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:

RS-422 for BKM-10R, D-sub 9-pin

Remote 1/Serial remote:

RS-485 serial interface, D-sub 9-pin, with loop-through

Remote 2/Parallel remote 1:

D-sub 9-pin x 1 (Short to ground)

ISR:

D-sub 9-pin (x 1)

#### Video signal performance

Frequency response:

48 Hz to 60 MHz +1dB/-3dB (x 2, Pseudo Display), 48 Hz to 90 MHz +1dB/-3dB (x 3)

Matrix:

ITU-709

DC restoration:

Black level fluctuation: less than 1% for 10 to 90% APL input signal variation

#### Synchronization

Retrace time:

Horizontal: Less than 2.49  $\mu$ s

Vertical: Less than 333  $\mu$ s

#### Raster and picture performance

Normal scan:

5% overscan of the effective picture area

Underscan:

3% underscan of the effective picture area

Linearity:

Within a central area bounded by a circle with a diameter equal to the picture height, less than 0.5% of the height, and outside the same area, about 1% of the picture height.

Color temperature:

STD (D65)/COL1 (D61)/COL2 (D65), user adjustable

Convergence:

Within a central area bounded by a circle with a diameter equal to the picture height, less than 0.3 mm with a central area bounded by a circle and less than 0.5 mm at any other point.

Preset brightness:

100 cd/m<sup>2</sup> (30 fL) (when a 1.0 Vp-p 100% white signal is input)

Raster size stability:

Less than 1% of picture height (at 100 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)

Scan delay:

Horizontal: Approx. 3/8 line

Vertical: Approx. 1/2 field

Center resolution:

1000 TV lines (16:9)

#### Operating conditions

Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86 °F)

Storage temperature:

-10 to 40 °C (14 to 104 °F)

Humidity:

0 to 90% (no condensation)

#### Regulation compliance

TUV (EN60950), EN55103-1, EN55103-2, PTB, CE, C-tick

## Monitors

# BVM-F24U CineAlta Color Video Monitor

### Features

●24-inch\* CineAlta color video monitor ●Supports various formats signals: 1080/24P, 24PsF; 1080/25P, 25PsF; 1080/50i, 60i (Alternate scan display. Frame rate is also compatible with 1/1.001.); 1080/50P, 60P etc. ●Built in HD-SDI decoder and frame converter for HD-SDI input to eliminate flicker ●Dual link HD-SDI inputs: 1080/24P (4:4:4), 1080/60i (4:4:4), 1080/60P (4:2:2) etc. ●SXGA Format Signal Support (frame rate: 75 Hz and 85 Hz) ●Equipped with various area makers supported the film aspect ratios ●16:9 aspect ratio Flat surface HR Trinitron CRT ●Resolution: 1000TV lines ●Phosphor: SMTPE-C\*On Screen Menu for adjustment and operation\*Auto white balance function\*Built-in various circuits of Beam landing, Digital uniformity and Digital convergence\*Separate control unit (BKM-10R/11R)\*Setup and adjustment with Memory card\*Built-in test signal generator for crosshatch, 100% white signal, 20% gray signal, gray scale, and PLUGE (Picture Line Up Generating Equipment)\*Pulse cross function for simultaneous checking of the horizontal and vertical synchronization signals

\*24-inch or 23-inch viewable area, measured diagonally.



### Optional Accessories

BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-12Y Memory Card  
BKM-34H Control Unit Attachment Kit  
BKM-14L Auto Setup Probe

### Specifications

#### General

Signal format:

54 kHz to 91.1 kHz

Type:

Display unit

Power requirements:

100 to 240 V AC  $\pm 10\%$ , 50/60 Hz

Power consumption:

225 W

Dimensions\*1:

565.5 (W) x 436.8 (H) x 609.3 (D) mm  
(22 3/8 x 17 1/4 x 24 1/8 inches)

Mass:

Approx. 54 kg (119 lb 1 oz)

CRT

CRT type:

24-inch HR Trinitron

AG pitch:

0.25 mm to 0.28 mm, 90° deflection,  $\phi 29.1$  mm in-line gun

Phosphor:

SMPTE-C

Effective picture size

16:9: 482.1 (W) x 271.2 (H) mm, 553.1 mm (diagonal)(19 x 10 3/4 inches, 21 7/8 inches)  
4:3: 361.6 (W) x 271.2 (H) mm, 452 mm (diagonal)(14 1/4 x 10 3/4 inches, 17 7/8 inches)

### Inputs/outputs

Video:

RGB:

BNC type x3 (75  $\Omega$ ), 0.7 Vp-p (1 Vp-p, Sync on Green) +3 dB/-6 dB, sync positive

HD-SDI (\*Single link (4:2:2), Dual link (4:2:2),

Dual link (4:4:4):

BNC type x 2 (75  $\Omega$ ) with monitor out, 1.485 Gbps (Data rate), 75  $\Omega$  unbalance (Impedance), Single Link Mode (Line1 or Line2): 2 inputs, Dual Link Mode (Link A and Link B): 1 input, \*Delay time range between Link A and Link B: Within  $\pm 1/2$  H

External sync:

BNC type x 2 (75  $\Omega$ )

Composite:

0.3 to 5.0 Vp-p, positive/negative tri-level sync signal input or negative bi-level sync signal input

Separate HS/VS:

0.3 to 5.0 Vp-p, positive sync/negative sync (Auto Selection)

Remote

Option:

RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:

RS-422 for BKM-10R, D-sub 9-pin

Remote 1/Serial remote:

RS-485 serial interface, D-sub 9-pin, with loop-through

Remote 2/Parallel remote 1:

D-sub 9-pin x 1 (Short to ground)

ISR:

D-sub 9-pin (x 1)

### Video signal performance

Frequency response:

48 Hz to 60 MHz +1dB/-3dB (x 2, Pseudo Display), 48 Hz to 90 MHz +1dB/-3dB (x 3)

Matrix:

ITU-709

DC restoration:

Black level fluctuation: less than 1% for 10 to 90% APL input signal variation

### Synchronization

Retrace time:

Horizontal: Less than 2.49  $\mu$ s  
Vertical: Less than 333  $\mu$ s

### Raster and picture performance

Normal scan:

5% overscan of the effective picture area

Underscan:

3% underscan of the effective picture area

Linearity:

Within a central area bounded by a circle with a diameter equal to the picture height, less than 0.5% of the height, and outside the same area, about 1% of the picture height.

Color temperature:

STD (D65)/COL1 (D61)/COL2 (D65), user adjustable

Convergence:

Within a central area bounded by a circle with a diameter equal to the picture height, less than 0.3 mm with a central area bounded by a circle and less than 0.5 mm at any other point.

Preset brightness:

100 cd/m<sup>2</sup> (30 fL) (when a 1.0 Vp-p 100% white signal is input)

Raster size stability:

Less than 1% of picture height (at 100 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)

Scan delay:

Horizontal: Approx. 3/8 line  
Vertical: Approx. 1/2 field

Center resolution:

1000 TV lines (16:9)

### Operating conditions

Operating temperature:

0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86 °F)

Storage temperature:

-10 to 40 °C (14 to 104 °F)

Humidity:

0 to 90% (no condensation)

### Regulation compliance

UL 1950/CSA 950 (cUL listed), FCC Class-A, IC Class-A, DHHS, DNHV

## Monitors

# BVM-D32E1WE Color Video Monitor

### Features

- 32-inch\* digital color master monitor
- Modular design with optional separate control unit
- Flat surface, 16:9 aspect HR Trinitron CRT provides a high resolution of 1000 TV lines
- EBU standard phosphors
- Beam current feedback circuit for stable color reproduction
- Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable
- Component (YPBPR/GBR) input available as standard
- 4 slots available for optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Beam landing correction
- Digital uniformity
- Digital convergence
- Built-in H/V delay, underscan, blue only, mono and tally functions
- Built-in test signal generator
- Aspect ratio 16:9 and 4:3 switchable
- 4:3 area marker
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Supported by Sony Interactive Status Reporting (ISR)

\* 29 5/8 inches (16:9)/24 1/4 inches (4:3) viewable area, measured diagonally.



### Supplied Accessories

- AC Cable (1)
- AC Plug Holder (1)
- Tally Label (1)
- Fuse (1)
- Operation Manual (1)

### Optional Accessories

- BKM-20D SDI 4:2:2 Decoder Adaptor
- BKM-21D SDI Multi Decoder Adaptor
- BKM-22X SDI Multi Input Expansion Adaptor
- BKM-24N NTSC Decoder Adaptor
- BKM-25P PAL Decoder Adaptor
- BKM-26M PAL-M Decoder Adaptor
- BKM-27T Tri-standard Decoder Adaptor
- BKM-28X Analog Input Expansion Adaptor
- BKM-41HD HD SDI Input Adaptor
- BKM-42HD HD SDI Input Adaptor
- BKM-48X HD Analog Input Expansion Adaptor
- BKM-10R Monitor Control Unit
- BKM-11R Monitor Control Unit
- BKM-12Y Memory Card
- BKM-14L Auto Setup Probe
- RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R.

Monitors

Specifications

General

Signal format:  
15.625 to 45 kHz

Type:  
Display unit

Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz

Power consumption:  
180 W (with options: max. 235 W)

Dimensions\*1:  
794 (W) x 556.5 (H) x 694 (D) mm  
(31 3/8 x 22 x 27 3/8 inches)

Mass:  
Approx. 94 kg (206 lb 13 oz)

CRT

CRT type:  
32-inch HR Trinitron (flat surface, 16:9 aspect)

AG pitch:  
0.32 to 0.36 mm, 90° deflection,  $\phi$ 29.1 mm in-line gun

Phosphor:  
EBU

Effective picture size

16:9:  
655.2 (W) x 368.5 (H) mm, 751.7 mm (diagonal)  
(25 7/8 x 14 5/8 inches, 29 5/8 inches)

4:3:  
491.3 (W) x 368.5 (H) mm, 614.1 mm (diagonal)  
(19 3/8 x 14 5/8 inches, 24 1/4 inches)

Inputs/outputs

Video:

Loop-through BNC

GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive

Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance

PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance

External sync:  
Loop-through BNC

Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level bipolar sync

Remote

Option:  
RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:  
RS-422 for BKM-10R, D-sub 9-pin

Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with loop-through

Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)

Parallel remote 2:  
Not applicable

ISR:  
D-sub 9-pin

Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 70 cd/m2

Differential phase (DP):  
Within 5° for luminance from 0 to 70 cd/m2

Frequency response:  
50 Hz to 30 MHz +1 dB/-3 dB

DC restoration:  
Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL

Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

**Raster and picture performance**

Normal scan:  
5% overscan of the effective picture area

Underscan:  
3% underscan of the effective picture area

Linearity:  
Less than 1% within circle centered on the screen with a diameter equal to the vertical height, 2% at any other point\*2

Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)

Convergence:  
Less than 0.5 mm within circle centered on the screen with a diameter equal to the vertical height, 0.8 mm at any other point

Preset brightness:  
70 cd/m2 (30 fL) (when a 1.0 Vp-p 100% white signal is input)

Raster size stability:  
1% of picture height (at 70 cd/m2 peak luminescence, 10 to 90% APL)

Scan delay:  
Horizontal: approx. 3/8 line  
Vertical: approx. 1/2 field

Center resolution:  
16:9: 1000 TV lines, 4:3: 1000 TV lines

Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86 °F)

Storage temperature:  
-10 to 40 °C (14 to 104 °F)

Humidity:  
0 to 90% (no condensation)

Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN 55103-2+EN 60950

\*1 Including all protruding parts. \*2 1080/60I and 1035/60I only.

## Monitors

# BVM-D32E1WU Color Video Monitor

### Features

- 32-inch\* digital color master monitor
- Modular design with optional separate control unit
- Flat surface, 16:9 aspect HR Trinitron CRT provides a high resolution of 1000 TV lines
- SMPTE-C standard phosphors
- Beam current feedback circuit for stable color reproduction
- Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable
- Component (YPBPR/GBR) input available as standard
- 4 slots available for optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Beam landing correction
- Digital uniformity
- Digital convergence
- Built-in H/V delay, underscan, blue only, mono and tally functions
- Built-in test signal generator
- Aspect ratio 16:9 and 4:3 switchable
- 4:3 area marker
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Supported by Sony Interactive Status Reporting (ISR)

\* 29 5/8 inches (16:9)/24 1/4 inches (4:3) viewable area, measured diagonally.



### Supplied Accessories

AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Fuse (1)  
Operation Manual (1)

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
BKM-21D SDI Multi Decoder Adaptor  
BKM-22X SDI Multi Input Expansion Adaptor  
BKM-24N NTSC Decoder Adaptor  
BKM-25P PAL Decoder Adaptor  
BKM-26M PAL-M Decoder Adaptor  
BKM-27T Tri-standard Decoder Adaptor  
BKM-28X Analog Input Expansion Adaptor  
BKM-41HD HD SDI Input Adaptor  
BKM-42HD HD SDI Input Adaptor  
BKM-48X HD Analog Input Expansion Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-12Y Memory Card  
BKM-14L Auto Setup Probe  
RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R.

Monitors

Specifications

General

Signal format:  
15.625 to 45 kHz

Type:  
Display unit

Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz

Power consumption:  
180 W (with options: max. 235 W)

Dimensions\*1:  
794 (W) x 556.5 (H) x 694 (D) mm  
(31 3/8 x 22 x 27 3/8 inches)

Mass:  
Approx. 94 kg (206 lb 13 oz)

CRT

CRT type:  
32-inch HR Trinitron (flat surface, 16:9 aspect)

AG pitch:  
0.32 to 0.36 mm, 90° deflection,  $\phi$ 29.1 mm in-line gun

Phosphor:  
SMPTE-C

Effective picture size

16:9:  
655.2 (W) x 368.5 (H) mm, 751.7 mm (diagonal)  
(25 7/8 x 14 5/8 inches, 29 5/8 inches)

4:3:  
491.3 (W) x 368.5 (H) mm, 614.1 mm (diagonal)  
(19 3/8 x 14 5/8 inches, 24 1/4 inches)

Inputs/outputs

Video:

Loop-through BNC

GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive

Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance

PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance

External sync:  
Loop-through BNC

Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level bipolar sync

Remote

Option:  
RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:  
RS-422 for BKM-10R, D-sub 9-pin

Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with loop-through

Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)

Parallel remote 2:  
Not applicable

ISR:  
D-sub 9-pin

Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 70 cd/m2

Differential phase (DP):  
Within 5° for luminance from 0 to 70 cd/m2

Frequency response:  
50 Hz to 30 MHz +1 dB/-3 dB

DC restoration:  
Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL

Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

Raster and picture performance

Normal scan:  
5% overscan of the effective picture area

Underscan:  
3% underscan of the effective picture area

Linearity:  
Less than 1% within circle centered on the screen with a diameter equal to the vertical height, 2% at any other point\*2

Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)

Convergence:  
Less than 0.5 mm within circle centered on the screen with a diameter equal to the vertical height, 0.8 mm at any other point

Preset brightness:  
70 cd/m2 (30 fL) (when a 1.0 Vp-p 100% white signal is input)

Raster size stability:  
1% of picture height (at 70 cd/m2 peak luminescence, 10 to 90% APL)

Scan delay:  
Horizontal: approx. 3/8 line  
Vertical: approx. 1/2 field

Center resolution:  
16:9: 1000 TV lines, 4:3: 1000 TV lines

Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86 °F)

Storage temperature:  
-10 to 40 °C (14 to 104 °F)

Humidity:  
0 to 90% (no condensation)

Regulation compliance

UL 1950/CSA 950 (cUL listed), FCC Class-A/ICC Class-A, DHHS/DNHW

\*1 Including all protruding parts. \*2 1080/60I and 1035/60I only.

## Monitors

# BVM-D24E1WA Color Video Monitor

### Features

●24-inch\* digital color master monitor ●Modular design with optional separate control unit ●Flat surface, 16:9 aspect HR Trinitron CRT provides a high resolution of 1000 TV lines ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●4 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Precise color temperature adjustment with a color analyzer ●Beam landing correction ●Digital uniformity ●Built-in H/V delay, underscan, blue only, mono and tally functions ●Built-in test signal generator ●Aspect ratio 16:9 and 4:3 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Optional memory card for storage and recall of primary setup data ●Supported by Sony Interactive Status Reporting (ISR)

\* 21 7/8 inches (16.9)/17 7/8 (4:3) viewable area, measured diagonally.



### Supplied Accessories

AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Fuse (1)  
Operation Manual (1)

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
BKM-21D SDI Multi Decoder Adaptor  
BKM-22X SDI Multi Input Expansion Adaptor  
BKM-24N NTSC Decoder Adaptor  
BKM-25P PAL Decoder Adaptor  
BKM-26M PAL-M Decoder Adaptor  
BKM-27T Tri-standard Decoder Adaptor  
BKM-28X Analog Input Expansion Adaptor  
BKM-41HD HD SDI Input Adaptor  
BKM-42HD HD SDI Input Adaptor  
BKM-48X HD Analog Input Expansion Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-12Y Memory Card  
BKM-14L Auto Setup Probe  
BKM-34H Control Unit Attachment Kit  
MB-510 Mounting Attachment  
RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R.

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Display unit  
Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz  
Power consumption:  
155 W (with options: max. 205 W)  
Dimensions\*1:  
565.5 (W) x 436.8 (H) x 587.3 (D) mm  
(22 3/8 x 17 1/4 x 23 1/8 inches)  
Mass:  
Approx. 51 kg (112 lb 3 oz)  
CRT  
CRT type:  
24-inch HR Trinitron (flat surface, 16:9 aspect)  
AG pitch:  
0.25 mm, 90° deflection,  $\phi$ 29.1 mm in-line gun

#### Phosphor:

EBU

#### Effective picture size

16:9:  
482.1 (W) x 271.2 (H) mm, 553.1 mm  
(diagonal)  
(19 x 10 3/4 inches, 21 7/8 inches)  
4:3:  
361.6 (W) x 271.2 (H) mm, 452 mm (diagonal)  
(14 1/4 x 10 3/4 inches, 17 7/8 inches)

#### Inputs/outputs

##### Video:

Loop-through BNC  
GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive  
Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance  
External sync:  
Loop-through BNC  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level  
bipolar sync

##### Remote

Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
RS-422 for BKM-10R, D-sub 9-pin  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with  
loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Not applicable  
ISR:  
D-sub 9-pin

#### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
50 Hz to 30 MHz +1 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1% of  
peak luminance, 10 to 90% APL

#### Synchronization

##### Retrace time:

Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

#### Raster and picture performance

##### Normal scan:

5% overscan of the effective picture area

##### Underscan:

3% underscan of the effective picture area

##### Linearity:

Less than 0.5% within circle centered on the  
screen with a diameter equal to the vertical  
height, 1% at any other point\*2

##### Color temperature:

D65/D93/COL 1/COL 2 (User adjustable)

##### Convergence:

Less than 0.4 mm within circle centered on the  
screen with a diameter equal to the vertical  
height, 0.7 mm at any other point

##### Preset brightness:

100 cd/m<sup>2</sup> (30 fL) (when a 1.0 Vp-p 100% white  
signal is input)

##### Raster size stability:

1% of picture height (at 100 cd/m<sup>2</sup> peak  
luminescence, 10 to 90% APL)

##### Scan delay:

Horizontal: approx. 3/8 line  
Vertical: approx. 1/2 field

##### Center resolution:

16:9: 1000 TV lines, 4:3: 1000 TV lines

#### Operating conditions

##### Operating temperature:

0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86  
°F)

##### Storage temperature:

-10 to 40 °C (14 to 104 °F)

##### Humidity:

0 to 90% (no condensation)

#### Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN  
55103-2+EN 60950

\*1 Including all protruding parts. \*2 1080/60l and  
1035/60l only.

## Monitors

# BVM-D24E1WE Color Video Monitor

### Features

●24-inch\* digital color master monitor ●Modular design with optional separate control unit ●Flat surface, 16:9 aspect HR Trinitron CRT provides a high resolution of 1000 TV lines ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●4 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Precise color temperature adjustment with a color analyzer ●Beam landing correction ●Digital uniformity ●Built-in H/V delay, underscan, blue only, mono and tally functions ●Built-in test signal generator ●Aspect ratio 16:9 and 4:3 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Optional memory card for storage and recall of primary setup data ●Supported by Sony Interactive Status Reporting (ISR)

\* 21 7/8 inches (16.9)/17 7/8 (4:3) viewable area, measured diagonally.



### Supplied Accessories

AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Fuse (1)  
Operation Manual (1)

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
BKM-21D SDI Multi Decoder Adaptor  
BKM-22X SDI Multi Input Expansion Adaptor  
BKM-24N NTSC Decoder Adaptor  
BKM-25P PAL Decoder Adaptor  
BKM-26M PAL-M Decoder Adaptor  
BKM-27T Tri-standard Decoder Adaptor  
BKM-28X Analog Input Expansion Adaptor  
BKM-41HD HD SDI Input Adaptor  
BKM-42HD HD SDI Input Adaptor  
BKM-48X HD Analog Input Expansion Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-12Y Memory Card  
BKM-14L Auto Setup Probe  
BKM-34H Control Unit Attachment Kit  
MB-510 Mounting Attachment  
RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R.

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Display unit  
Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz  
Power consumption:  
155 W (with options: max. 205 W)  
Dimensions\*1:  
565.5 (W) x 436.8 (H) x 587.3 (D) mm  
(22 3/8 x 17 1/4 x 23 1/8 inches)  
Mass:  
Approx. 51 kg (112 lb 3 oz)  
CRT  
CRT type:  
24-inch HR Trinitron (flat surface, 16:9 aspect)  
AG pitch:  
0.25 mm, 90° deflection,  $\phi$ 29.1 mm in-line gun

#### Phosphor:

EBU

#### Effective picture size

16:9:

482.1 (W) x 271.2 (H) mm, 553.1 mm  
(diagonal)

(19 x 10 3/4 inches, 21 7/8 inches)

4:3:

361.6 (W) x 271.2 (H) mm, 452 mm (diagonal)  
(14 1/4 x 10 3/4 inches, 17 7/8 inches)

#### Inputs/outputs

##### Video:

Loop-through BNC

GBR:

1.0 Vp-p  $\pm$ 6 dB, positive

Y:

1.0 Vp-p  $\pm$ 6 dB, high impedance

PB/PR:

0.7 Vp-p  $\pm$ 6 dB, high impedance

##### External sync:

Loop-through BNC

Composite:

0.3 to 8.0 Vp-p, high impedance, tri-level  
bipolar sync

##### Remote

Option:

RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:

RS-422 for BKM-10R, D-sub 9-pin

Remote 1/Serial remote:

RS-485 serial interface, D-sub 9-pin, with  
loop-through

Remote 2/Parallel remote 1:

D-sub 9-pin (Short to ground)

Parallel remote 2:

Not applicable

ISR:

D-sub 9-pin

#### Video signal performance

Differential gain (DG):

Within 5% for luminance from 0 to 100 cd/m2

Differential phase (DP):

Within 5° for luminance from 0 to 100 cd/m2

Frequency response:

50 Hz to 30 MHz  $\pm$ 1 dB/-3 dB

DC restoration:

Back porch type, back porch level: within 1% of  
peak luminance, 10 to 90% APL

#### Synchronization

Retrace time:

Horizontal: under 3.77  $\mu$ s

Vertical: under 650  $\mu$ s

#### Raster and picture performance

Normal scan:

5% overscan of the effective picture area

Underscan:

3% underscan of the effective picture area

Linearity:

Less than 0.5% within circle centered on the  
screen with a diameter equal to the vertical  
height, 1% at any other point\*2

Color temperature:

D65/D93/COL 1/COL 2 (User adjustable)

Convergence:

Less than 0.4 mm within circle centered on the  
screen with a diameter equal to the vertical  
height, 0.7 mm at any other point

Preset brightness:

100 cd/m2 (30 fL) (when a 1.0 Vp-p 100% white  
signal is input)

Raster size stability:

1% of picture height (at 100 cd/m2 peak  
luminescence, 10 to 90% APL)

Scan delay:

Horizontal: approx. 3/8 line

Vertical: approx. 1/2 field

Center resolution:

16:9: 1000 TV lines, 4:3: 1000 TV lines

#### Operating conditions

Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86  
°F)

Storage temperature:

-10 to 40 °C (14 to 104 °F)

Humidity:

0 to 90% (no condensation)

#### Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN  
55103-2+EN 60950

\*1 Including all protruding parts. \*2 1080/60l and  
1035/60l only.

## Monitors

# BVM-D24E1WU Color Video Monitor

### Features

●24-inch\* digital color master monitor ●Modular design with optional separate control unit ●Flat surface, 16:9 aspect HR Trinitron CRT provides a high resolution of 1000 TV lines ●SMPTE-C standard phosphors ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●4 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Precise color temperature adjustment with a color analyzer ●Beam landing correction ●Digital uniformity ●Built-in H/V delay, underscan, blue only, mono and tally functions ●Built-in test signal generator ●Aspect ratio 16:9 and 4:3 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Optional memory card for storage and recall of primary setup data ●Supported by Sony Interactive Status Reporting (ISR)

\* 21 7/8 inches (16.9)/17 7/8 (4:3) viewable area, measured diagonally.



### Supplied Accessories

AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Fuse (1)  
Operation Manual (1)

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
BKM-21D SDI Multi Decoder Adaptor  
BKM-22X SDI Multi Input Expansion Adaptor  
BKM-24N NTSC Decoder Adaptor  
BKM-25P PAL Decoder Adaptor  
BKM-26M PAL-M Decoder Adaptor  
BKM-27T Tri-standard Decoder Adaptor  
BKM-28X Analog Input Expansion Adaptor  
BKM-41HD HD SDI Input Adaptor  
BKM-42HD HD SDI Input Adaptor  
BKM-48X HD Analog Input Expansion Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-12Y Memory Card  
BKM-14L Auto Setup Probe  
BKM-34H Control Unit Attachment Kit  
MB-510 Mounting Attachment  
RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R.

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Display unit  
Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz  
Power consumption:  
155 W (with options: max. 205 W)  
Dimensions\*1:  
565.5 (W) x 436.8 (H) x 587.3 (D) mm  
(22 3/8 x 17 1/4 x 23 1/8 inches)  
Mass:  
Approx. 51 kg (112 lb 3 oz)  
CRT  
CRT type:  
24-inch HR Trinitron (flat surface, 16:9 aspect)  
AG pitch:  
0.25 mm, 90° deflection,  $\phi$ 29.1 mm in-line gun

#### Phosphor:

SMPTE-C

#### Effective picture size

16:9:

482.1 (W) x 271.2 (H) mm, 553.1 mm  
(diagonal)

(19 x 10 3/4 inches, 21 7/8 inches)

4:3:

361.6 (W) x 271.2 (H) mm, 452 mm (diagonal)

(14 1/4 x 10 3/4 inches, 17 7/8 inches)

#### Inputs/outputs

##### Video:

Loop-through BNC

GBR:

1.0 Vp-p  $\pm$ 6 dB, positive

Y:

1.0 Vp-p  $\pm$ 6 dB, high impedance

PB/PR:

0.7 Vp-p  $\pm$ 6 dB, high impedance

##### External sync:

Loop-through BNC

Composite:

0.3 to 8.0 Vp-p, high impedance, tri-level  
bipolar sync

##### Remote

Option:

RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:

RS-422 for BKM-10R, D-sub 9-pin

Remote 1/Serial remote:

RS-485 serial interface, D-sub 9-pin, with  
loop-through

Remote 2/Parallel remote 1:

D-sub 9-pin (Short to ground)

Parallel remote 2:

Not applicable

ISR:

D-sub 9-pin

#### Video signal performance

Differential gain (DG):

Within 5% for luminance from 0 to 100 cd/m2

Differential phase (DP):

Within 5° for luminance from 0 to 100 cd/m2

Frequency response:

50 Hz to 30 MHz  $\pm$ 1 dB/-3 dB

DC restoration:

Back porch type, back porch level: within 1% of  
peak luminance, 10 to 90% APL

#### Synchronization

Retrace time:

Horizontal: under 3.77  $\mu$ s

Vertical: under 650  $\mu$ s

#### Raster and picture performance

Normal scan:

5% overscan of the effective picture area

Underscan:

3% underscan of the effective picture area

Linearity:

Less than 0.5% within circle centered on the  
screen with a diameter equal to the vertical  
height, 1% at any other point\*2

Color temperature:

D65/D93/COL 1/COL 2 (User adjustable)

Convergence:

Less than 0.4 mm within circle centered on the  
screen with a diameter equal to the vertical  
height, 0.7 mm at any other point

Preset brightness:

100 cd/m2 (30 fL) (when a 1.0 Vp-p 100% white  
signal is input)

Raster size stability:

1% of picture height (at 100 cd/m2 peak  
luminescence, 10 to 90% APL)

Scan delay:

Horizontal: approx. 3/8 line

Vertical: approx. 1/2 field

Center resolution:

16:9: 1000 TV lines, 4:3: 1000 TV lines

#### Operating conditions

Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86  
°F)

Storage temperature:

-10 to 40 °C (14 to 104 °F)

Humidity:

0 to 90% (no condensation)

#### Regulation compliance

UL 1950/CSA 950 (cUL listed), FCC Class A/IC  
Class-A, DHHS/DNHW

\*1 Including all protruding parts. \*2 1080/60l and  
1035/60l only.

## Monitors

# BVM-D20F1A Color Video Monitor

### Features

- 20-inch\* digital color master monitor
- Modular design with optional separate control unit
- HR Trinitron CRT provides a high resolution of 900/700 TV lines (4:3/16:9 modes)
- EBU standard phosphors
- Beam current feedback circuit for stable color reproduction
- Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable
- Component (YPBPR/GBR) input available as standard
- 4 slots available for optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Built-in H/V delay, underscan, blue only, mono and tally functions
- Built-in test signal generator
- Aspect ratio 4:3 and 16:9 switchable
- 4:3 area marker
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Mountable into a 19-inch EIA standard rack with the optional rack mount kit
- Supported by Sony Interactive Status Reporting (ISR)

\* 19 inches (4:3)/17 1/2 inches (16:9) viewable area, measured diagonally.

### Supplied Accessories

4:3 Mask (1)  
 AC Cable (1)  
 AC Plug Holder (1)  
 Tally Label (1)  
 Fuse (1)  
 Operation Manual (1)

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
 BKM-21D SDI Multi Decoder Adaptor  
 BKM-22X SDI Multi Input Expansion Adaptor  
 BKM-24N NTSC Decoder Adaptor  
 BKM-25P PAL Decoder Adaptor  
 BKM-26M PAL-M Decoder Adaptor  
 BKM-27T Tri-standard Decoder Adaptor  
 BKM-28X Analog Input Expansion Adaptor  
 BKM-32H Control Unit Attachment Kit  
 BKM-41HD HD SDI Input Adaptor  
 BKM-42HD HD SDI Input Adaptor  
 BKM-48X HD Analog Input Expansion Adaptor  
 BKM-10R Monitor Control Unit  
 BKM-11R Monitor Control Unit  
 BKM-12Y Memory Card  
 BKM-14L Auto Setup Probe  
 BKM-30E20 Rack Mount Kit  
 MB-510 Mounting Attachment  
 RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R.



Monitors

Specifications

General

Signal format:  
15.625 to 45 kHz

Type:  
Display unit

Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz

Power consumption:  
150 W (with options: max. 210 W)

Dimensions\*1:  
444 (W) x 414 (H) x 570 (D) mm  
(17 1/2 x 16 3/8 x 22 1/2 inches)

Mass:  
Approx. 38 kg (83 lb 10 oz)

CRT

CRT type:  
20-inch HR Trinitron

AG pitch:  
0.30 mm, 90° deflection,  $\phi$ 30.6 mm  
in-line gun

Phosphor:  
EBU

Effective picture size  
16:9:  
386 (W)  $\times$  218 (H) mm, 443 mm  
(diagonal)  
(15 1/4  $\times$  8 5/8 inches, 17 1/2 inches)  
4:3:  
386 (W)  $\times$  291 (H) mm, 482 mm  
(diagonal)  
(15 1/4  $\times$  11 1/2 inches, 19 inches)

Inputs/outputs

Video:  
Loop-through BNC

GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive

Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance

PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance

External sync:  
Loop-through BNC

Composite:  
0.3 to 8.0 Vp-p, high impedance,  
tri-level bipolar sync

Remote

Option:  
RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:  
RS-422 for BKM-10R, D-sub 9-pin

Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin,  
with loop-through

Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)

Parallel remote 2:  
Not Applicable

ISR:  
D-sub 9-pin

Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100  
cd/m2

Differential phase (DP):  
Within 5° for luminance from 0 to 100  
cd/m2

Frequency response:  
50 Hz to 30 MHz +1 dB/-3 dB

DC restoration:  
Back porch type, back porch level: within  
1% of peak luminance, 10 to 90% APL

Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

**Raster and picture performance**

Normal scan:  
5% overscan of the effective picture area

Underscan:  
3% underscan of the effective picture area

Linearity:  
Less than 0.5% within circle centered on  
the screen with a diameter equal to the  
vertical height, 1% at any other point\*2

Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)

Convergence:  
Less than 0.4 mm within circle centered on  
the screen with a diameter equal to the  
vertical height, 0.5 mm at any other point

Preset brightness:  
100 cd/m2 (30 fL) (when a 1.0 Vp-p 100%  
white signal is input)

Raster size stability:  
1% of picture height (at 100 cd/m2 peak  
luminescence, 10 to 90% APL)

Scan delay:  
Horizontal: approx. 3/8 line  
Vertical: approx. 1/2 field

Center resolution:  
4:3: 900 TV lines, 16:9: 700 TV lines

Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68  
to 86 °F)

Storage temperature:  
-10 to 40 °C (14 to 104 °F)

Humidity:  
0 to 90% (no condensation)

Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN  
55103-2+EN 60950

\*1 Including all protruding parts. \*2 1080/60I and  
1035/60I only.

## Monitors

# BVM-D20F1E Color Video Monitor

### Features

- 20-inch\* digital color master monitor
- Modular design with optional separate control unit
- HR Trinitron CRT provides a high resolution of 900/700 TV lines (4:3/16:9 modes)
- EBU standard phosphors
- Beam current feedback circuit for stable color reproduction
- Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable
- Component (YPBPR/GBR) input available as standard
- 4 slots available for optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Built-in H/V delay, underscan, blue only, mono and tally functions
- Built-in test signal generator
- Aspect ratio 4:3 and 16:9 switchable
- 4:3 area marker
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Mountable into a 19-inch EIA standard rack with the optional rack mount kit
- Supported by Sony Interactive Status Reporting (ISR)

\* 19 inches (4:3)/17 1/2 inches (16:9) viewable area, measured diagonally.

### Supplied Accessories

4:3 Mask (1)  
 AC Cable (1)  
 AC Plug Holder (1)  
 Tally Label (1)  
 Fuse (1)  
 Operation Manual (1)

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
 BKM-21D SDI Multi Decoder Adaptor  
 BKM-22X SDI Multi Input Expansion Adaptor  
 BKM-24N NTSC Decoder Adaptor  
 BKM-25P PAL Decoder Adaptor  
 BKM-26M PAL-M Decoder Adaptor  
 BKM-27T Tri-standard Decoder Adaptor  
 BKM-28X Analog Input Expansion Adaptor  
 BKM-32H Control Unit Attachment Kit  
 BKM-41HD HD SDI Input Adaptor  
 BKM-42HD HD SDI Input Adaptor  
 BKM-48X HD Analog Input Expansion Adaptor  
 BKM-10R Monitor Control Unit  
 BKM-11R Monitor Control Unit  
 BKM-12Y Memory Card  
 BKM-14L Auto Setup Probe  
 BKM-30E20 Rack Mount Kit  
 MB-510 Mounting Attachment  
 RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R.



# Monitors

## Specifications

### General

Signal format:  
15.625 to 45 kHz

Type:  
Display unit

Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz

Power consumption:  
150 W (with options: max. 210 W)

Dimensions\*1:  
444 (W) x 414 (H) x 570 (D) mm  
(17 1/2 x 16 3/8 x 22 1/2 inches)

Mass:  
Approx. 38 kg (83 lb 10 oz)

CRT

CRT type:  
20-inch HR Trinitron

AG pitch:  
0.30 mm, 90° deflection,  $\phi$ 30.6 mm  
in-line gun

Phosphor:  
EBU

Effective picture size  
16:9:  
386 (W)  $\times$  218 (H) mm, 443 mm  
(diagonal)  
(15 1/4  $\times$  8 5/8 inches, 17 1/2 inches)  
4:3:  
386 (W)  $\times$  291 (H) mm, 482 mm  
(diagonal)  
(15 1/4  $\times$  11 1/2 inches, 19 inches)

### Inputs/outputs

Video:  
Loop-through BNC

GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive

Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance

PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance

External sync:  
Loop-through BNC

Composite:  
0.3 to 8.0 Vp-p, high impedance,  
tri-level bipolar sync

Remote

Option:  
RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:  
RS-422 for BKM-10R, D-sub 9-pin

Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin,  
with loop-through

Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)

Parallel remote 2:  
Not Applicable

ISR:  
D-sub 9-pin

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100  
cd/m2

Differential phase (DP):  
Within 5° for luminance from 0 to 100  
cd/m2

Frequency response:  
50 Hz to 30 MHz +1 dB/-3 dB

DC restoration:  
Back porch type, back porch level: within  
1% of peak luminance, 10 to 90% APL

## Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

**Raster and picture performance**

Normal scan:  
5% overscan of the effective picture area

Underscan:  
3% underscan of the effective picture area

Linearity:  
Less than 0.5% within circle centered on  
the screen with a diameter equal to the  
vertical height, 1% at any other point\*2

Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)

Convergence:  
Less than 0.4 mm within circle centered on  
the screen with a diameter equal to the  
vertical height, 0.5 mm at any other point

Preset brightness:  
100 cd/m2 (30 fL) (when a 1.0 Vp-p 100%  
white signal is input)

Raster size stability:  
1% of picture height (at 100 cd/m2 peak  
luminescence, 10 to 90% APL)

Scan delay:  
Horizontal: Approx. 3/8 line  
Vertical: Approx. 1/2 field

Center resolution:  
4:3: 900 TV lines, 16:9: 700 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68  
to 86 °F)

Storage temperature:  
-10 to 40 °C (14 to 104 °F)

Humidity:  
0 to 90% (no condensation)

### Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN  
55103-2+EN 60950

\*1 Including all protruding parts. \*2 1080/60I and  
1035/60I only.

## Monitors

# BVM-D20F1U Color Video Monitor

### Features

- 20-inch\* digital color master monitor
- Modular design with optional separate control unit
- HR Trinitron CRT provides a high resolution of 900/700 TV lines (4:3/16:9 modes)
- SMPTE-C standard phosphors
- Beam current feedback circuit for stable color reproduction
- Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable
- Component (YPBPR/GBR) input available as standard
- 4 slots available for optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Built-in H/V delay, underscan, blue only, mono and tally functions
- Built-in test signal generator
- Aspect ratio 4:3 and 16:9 switchable
- 4:3 area marker
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Mountable into a 19-inch EIA standard rack with the optional rack mount kit
- Supported by Sony Interactive Status Reporting (ISR)

\* 19 inches (4:3)/17 1/2 inches (16:9) viewable area, measured diagonally.

### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Fuse (1)  
Operation Manual (1)

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
BKM-21D SDI Multi Decoder Adaptor  
BKM-22X SDI Multi Input Expansion Adaptor  
BKM-24N NTSC Decoder Adaptor  
BKM-25P PAL Decoder Adaptor  
BKM-26M PAL-M Decoder Adaptor  
BKM-27T Tri-standard Decoder Adaptor  
BKM-28X Analog Input Expansion Adaptor  
BKM-32H Control Unit Attachment Kit  
BKM-41HD HD SDI Input Adaptor  
BKM-42HD HD SDI Input Adaptor  
BKM-48X HD Analog Input Expansion Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-12Y Memory Card  
BKM-14L Auto Setup Probe  
BKM-30E20 Rack Mount Kit  
MB-510 Mounting Attachment  
RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R.



Monitors

Specifications

General

Signal format:  
15.625 to 45 kHz

Type:  
Display unit

Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz

Power consumption:  
150 W (with options: max. 210 W)

Dimensions\*1:  
444 (W) x 414 (H) x 570 (D) mm  
(17 1/2 x 16 3/8 x 22 1/2 inches)

Mass:  
Approx. 38 kg (83 lb 10 oz)

CRT

CRT type:  
20-inch HR Trinitron

AG pitch:  
0.30 mm, 90° deflection,  $\phi$ 30.6 mm  
in-line gun

Phosphor:  
SMPTE-C

Effective picture size  
16:9:  
386 (W)  $\times$  218 (H) mm, 443 mm  
(diagonal)  
(15 1/4  $\times$  8 5/8 inches, 17 1/2 inches)  
4:3:  
386 (W)  $\times$  291 (H) mm, 482 mm  
(diagonal)  
(15 1/4  $\times$  11 1/2 inches, 19 inches)

Inputs/outputs

Video:  
Loop-through BNC

GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive

Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance

PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance

External sync:  
Loop-through BNC

Composite:  
0.3 to 8.0 Vp-p, high impedance,  
tri-level bipolar sync

Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:  
RS-422 for BKM-10R, D-sub 9-pin

Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin,  
with loop-through

Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)

Parallel remote 2:  
Not Applicable

ISR:  
D-sub 9-pin

Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100  
cd/m2

Differential phase (DP):  
Within 5° for luminance from 0 to 100  
cd/m2

Frequency response:  
50 Hz to 30 MHz +1 dB/-3 dB

DC restoration:  
Back porch type, back porch level: within  
1% of peak luminance, 10 to 90% APL

Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

**Raster and picture performance**

Normal scan:  
5% overscan of the effective picture area

Underscan:  
3% underscan of the effective picture area

Linearity:  
Less than 0.5% within circle centered on  
the screen with a diameter equal to the  
vertical height, 1% at any other point\*2

Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)

Convergence:  
Less than 0.4 mm within circle centered on  
the screen with a diameter equal to the  
vertical height, 0.5 mm at any other point

Preset brightness:  
100 cd/m2 (30 fL) (when a 1.0 Vp-p 100%  
white signal is input)

Raster size stability:  
1% of picture height (at 100 cd/m2 peak  
luminescence, 10 to 90% APL)

Scan delay:  
Horizontal: approx. 3/8 line  
Vertical: approx. 1/2 field

Center resolution:  
4:3: 900 TV lines, 16:9: 700 TV lines

Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68  
to 86 °F)

Storage temperature:  
-10 to 40 °C (14 to 104 °F)

Humidity:  
0 to 90% (no condensation)

Regulation compliance

UL 1950/CSA 950 (cUL listed), FCC  
Class-A/IC Class-A, DHHS/DNHW

\*1 Including all protruding parts. \*2 1080/60I and  
1035/60I only.

## Monitors

# BVM-D14H1A Color Video Monitor

### Features

●14-inch\* digital color picture monitor ●Modular design with optional separate control unit ●HR Trinitron CRT provides a high resolution of 800/600 TV lines (4:3/16:9 modes) ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Precise color temperature adjustment with a color analyzer ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Built-in test signal generator ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mount kit

\* 12 1/8 inches (16:9)/13 1/8 inches (4:3) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
BKM-31E14 Rack Mount Kit  
MB-510 Mounting Attachment  
RCC-G Cables 9-pin/9-pin Cable

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Display unit  
Power requirements:  
100 to 240 V AC  $\pm 10\%$ , 50/60 Hz  
Power consumption:  
100 W (with options: max. 115 W)  
Dimensions\*:  
346 (W) x 280 (H) x 519 (D) mm  
(13 5/8 x 11 1/8 x 20 1/2 inches)  
Mass:  
Approx. 21 kg (46 lb 3 oz)  
CRT  
CRT type:  
14-inch HR Trinitron  
AG pitch:  
0.25 mm, 90° deflection,  $\phi 29.4$  mm in-line gun  
Phosphor:  
EBU

### Effective picture size:

16:9:  
267.5 (W) x 150.5 (H) mm, 306.9 mm  
(diagonal)  
(10 5/8 x 6 inches, 12 1/8 inches)  
4:3:  
267.5 (W) x 200.6 (H) mm, 331.6 mm  
(diagonal)  
(10 5/8 x 8 inches, 13 1/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm 6$  dB, positive  
Y:  
1.0 Vp-p  $\pm 6$  dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm 6$  dB, high impedance  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level bipolar sync  
Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
RS-422 for BKM-10R, D-sub 9-pin  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 24 MHz +0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s  
**Raster and picture performance**  
Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 1% within circle centered on the screen with a diameter equal to the vertical height, 2% at any other point  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the screen with a diameter equal to the vertical height, 0.5 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100% white signal is input)  
Raster size stability:  
1% of picture height (at 120 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)  
Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)  
**Regulation compliance**  
EN 60950 (TUV GS), CE: EN 55103-1+EN 55103-2+EN 60950

\* Including all protruding parts.

## Monitors

# BVM-D14H1E Color Video Monitor

### Features

●14-inch\* digital color picture monitor ●Modular design with optional separate control unit ●HR Trinitron CRT provides a high resolution of 800/600 TV lines (4:3/16:9 modes) ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Precise color temperature adjustment with a color analyzer ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Built-in test signal generator ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mount kit

\* 13 1/8 inches (4:3)/12 1/8 inches (16:9) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
BKM-31E14 Rack Mount Kit  
MB-510 Mounting Attachment  
RCC-G Cables 9-pin/9-pin Cable

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Display unit  
Power requirements:  
100 to 240 V AC  $\pm 10\%$ , 50/60 Hz  
Power consumption:  
100 W (with options: max. 115 W)  
Dimensions\*:  
346 (W) x 280 (H) x 519 (D) mm  
(13 5/8 x 11 1/8 x 20 1/2 inches)  
Mass:  
Approx. 21 kg (46 lb 3 oz)  
CRT  
CRT type:  
14-inch HR Trinitron  
AG pitch:  
0.25 mm, 90° deflection,  $\phi 29.4$  mm in-line gun  
Phosphor:  
EBU

### Effective picture size

16:9:  
267.5 (W) x 150.5 (H) mm, 306.9 mm  
(diagonal)  
(10 5/8 x 6 inches, 12 1/8 inches)  
4:3:  
267.5 (W) x 200.6 (H) mm, 331.6 mm  
(diagonal)  
(10 5/8 x 8 inches, 13 1/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm 6$  dB, positive  
Y:  
1.0 Vp-p  $\pm 6$  dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm 6$  dB, high impedance  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level bipolar sync  
Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
RS-422 for BKM-10R, D-sub 9-pin  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 24 MHz +0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s  
**Raster and picture performance**  
Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 1% within circle centered on the screen with a diameter equal to the vertical height, 2% at any other point  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the screen with a diameter equal to the vertical height, 0.5 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100% white signal is input)  
Raster size stability:  
1% of picture height (at 120 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)  
Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)  
**Regulation compliance**  
EN 60950 (TUV GS), CE: EN 55103-1+EN 55103-2+EN 60950

\* Including all protruding parts.

## Monitors

# BVM-D14H1U Color Video Monitor

### Features

●14-inch\* digital color picture monitor ●Modular design with optional separate control unit ●HR Trinitron CRT provides a high resolution of 800/600 TV lines (4:3/16:9 modes) ●SMPTE-C standard phosphors ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Precise color temperature adjustment with a color analyzer ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Built-in test signal generator ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mount kit

\* 13 1/8 inches (4:3)/12 1/8 inches (16:9) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
BKM-31E14 Rack Mount Kit  
MB-510 Mounting Attachment  
RCC-G Cables 9-pin/9-pin Cable

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Display unit  
Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz  
Power consumption:  
100 W (with options: max. 115 W)  
Dimensions\*:  
346 (W) x 280 (H) x 519 (D) mm  
(13 5/8 x 11 1/8 x 20 1/2 inches)  
Mass:  
Approx. 21 kg (46 lb 3 oz)  
CRT  
CRT type:  
14-inch HR Trinitron  
AG pitch:  
0.25 mm, 90° deflection,  $\phi$ 29.4 mm in-line gun  
Phosphor:  
SMPTE-C

### Effective picture size

16:9:  
267.5 (W) x 150.5 (H) mm, 306.9 mm  
(diagonal)  
(10 5/8 x 6 inches, 12 1/8 inches)  
4:3:  
267.5 (W) x 200.6 (H) mm, 331.6 mm  
(diagonal)  
(10 5/8 x 8 inches, 13 1/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive  
Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance  
External sync:  
Loop-through BNC, Automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level  
bipolar sync  
Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
RS-422 for BKM-10R, D-sub 9-pin  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with  
loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 24 MHz +0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1% of  
peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s  
**Raster and picture performance**  
Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 1% within circle centered on the  
screen with a diameter equal to the vertical  
height, 2% at any other point  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the  
screen with a diameter equal to the vertical  
height, 0.5 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100% white  
signal is input)  
Raster size stability:  
1% of picture height (at 120 cd/m<sup>2</sup> peak  
luminescence, 10 to 90% APL)  
Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86  
°F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)

### Regulation compliance

UL 1950/CSA 950 (cUL listed), FCC Class A/IC  
Class A, DHHS/DNHW

\* Including all protruding parts.

## Monitors

# BVM-D14H5A Color Video Monitor

### Features

●14-inch\* digital color picture monitor ●Stand-alone design with integral control unit ●HR Trinitron CRT provides a high resolution of 800/600 TV lines (4:3/16:9 modes) ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Precise color temperature adjustment with a color analyzer ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Built-in test signal generator ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mount kit

\* 13 1/8 inches (4:3)/12 1/8 inches (16:9) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
BKM-30E14 Rack Mount Kit  
RCC-G Cables 9-pin/9-pin Cable

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Stand-alone monitor  
Power requirements:  
100 to 240 V AC  $\pm 10\%$ , 50/60 Hz  
Power consumption:  
100 W (with options: max. 115 W)  
Dimensions\*:  
482 (W) x 280 (H) x 562 (D) mm  
(19 x 11 1/8 x 22 1/4 inches)  
Mass:  
Approx. 23 kg (50 lb 10 oz)  
CRT  
CRT type:  
14-inch HR Trinitron  
AG pitch:  
0.25 mm, 90° deflection,  $\phi 29.4$  mm in-line gun  
Phosphor:  
EBU

### Effective picture size

16:9:  
267.5 (W) x 150.5 (H) mm, 306.9 mm  
(diagonal)  
(10 5/8 x 6 inches, 12 1/8 inches)  
4:3:  
267.5 (W) x 200.6 (H) mm, 331.6 mm  
(diagonal)  
(10 5/8 x 8 inches, 13 1/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm 6$  dB, positive  
Y:  
1.0 Vp-p  $\pm 6$  dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm 6$  dB, high impedance  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level bipolar sync  
Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
Not applicable  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 24 MHz +0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s  
**Raster and picture performance**  
Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 1% within circle centered on the screen with a diameter equal to the vertical height, 2% at any other point  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the screen with a diameter equal to the vertical height, 0.5 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100% white signal is input)  
Stability of raster size:  
1% of picture height (at 120 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)  
Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)  
**Regulation compliance**  
EN 60950 (TUV GS), CE: EN 55103-1+EN 55103-2+EN 60950

\* Including all protruding parts.

## Monitors

# BVM-D14H5E Color Video Monitor

### Features

●14-inch\* digital color picture monitor ●Stand-alone design with integral control unit ●HR Trinitron CRT provides a high resolution of 800/600 TV lines (4:3/16:9 modes) ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Precise color temperature adjustment with a color analyzer ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Built-in test signal generator ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mount kit

\* 13 1/8 inches (4:3)/12 1/8 inches (16:9) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
BKM-30E14 Rack Mount Kit  
RCC-G Cables 9-pin/9-pin Cable

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Stand-alone monitor  
Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz  
Power consumption:  
100 W (with options: max. 115 W)  
Dimensions\*:  
482 (W) x 280 (H) x 562 (D) mm  
(19 x 11 1/8 x 22 1/4 inches)  
Mass:  
Approx. 23 kg (50 lb 10 oz)  
CRT  
CRT type:  
14-inch HR Trinitron  
AG pitch:  
0.25 mm, 90° deflection,  $\phi$ 29.4 mm in-line gun  
Phosphor:  
EBU

### Effective picture size

16:9:  
267.5 (W) x 150.5 (H) mm, 306.9 mm  
(diagonal)  
(10 5/8 x 6 inches, 12 1/8 inches)  
4:3:  
267.5 (W) x 200.6 (H) mm, 331.6 mm  
(diagonal)  
(10 5/8 x 8 inches, 13 1/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive  
Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level bipolar sync  
Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
Not applicable  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 24 MHz +0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

### Raster and picture performance

Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 1% within circle centered on the screen with a diameter equal to the vertical height, 2% at any other point  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the screen with a diameter equal to the vertical height, 0.5 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100% white signal is input)  
Stability of raster size:  
1% of picture height (at 120 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)  
Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)

### Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN 55103-2+EN 60950

\* Including all protruding parts.

## Monitors

# BVM-D14H5U Color Video Monitor

### Features

●14-inch\* digital color picture monitor ●Stand-alone design with integral control unit ●HR Trinitron CRT provides a high resolution of 800/600 TV lines (4:3/16:9 modes) ●SMPTE-C standard phosphors ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Precise color temperature adjustment with a color analyzer ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Built-in test signal generator ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mount kit

\* 13 1/8 inches (4:3)/12 1/8 inches (16:9) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
BKM-30E14 Rack Mount Kit  
RCC-G Cables 9-pin/9-pin Cable

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Stand-alone monitor  
Power requirements:  
100 to 240 V AC  $\pm 10\%$ , 50/60 Hz  
Power consumption:  
100 W (with options: max. 115 W)  
Dimensions\*:  
482 (W) x 280 (H) x 562 (D) mm  
(19 x 11 1/8 x 22 1/4 inches)  
Mass:  
Approx. 23 kg (50 lb 10 oz)  
CRT  
CRT type:  
14-inch HR Trinitron  
AG pitch:  
0.25 mm, 90° deflection,  $\phi 29.4$  mm in-line gun  
Phosphor:  
SMPTE-C

### Effective picture size

16:9:  
267.5 (W) x 150.5 (H) mm, 306.9 mm  
(diagonal)  
(10 5/8 x 6 inches, 12 1/8 inches)  
4:3:  
267.5 (W) x 200.6 (H) mm, 331.6 mm  
(diagonal)  
(10 5/8 x 8 inches, 13 1/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm 6$  dB, positive  
Y:  
1.0 Vp-p  $\pm 6$  dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm 6$  dB, high impedance  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level bipolar sync  
Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
Not applicable  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 24 MHz +0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

### Raster and picture performance

Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 1% within circle centered on the screen with a diameter equal to the vertical height, 2% at any other point  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the screen with a diameter equal to the vertical height, 0.5 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100% white signal is input)  
Stability of raster size:  
1% of picture height (at 120 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)  
Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)

### Regulation compliance

UL 1950/CSA 950 (cUL listed), FCC Class-A/IC Class-A, DHHS/DNHW

\* Including all protruding parts.

## Monitors

# BVM-D9H1A Color Video Monitor

### Features

- 9-inch\* digital color picture monitor
- Modular design with optional separate control unit
- HR Trinitron CRT displays a high resolution of 450/340 TV lines (4:3/16:9 modes)
- Beam current feedback circuit for stable color reproduction
- Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable
- Component (YPBPR/GBR) input available as standard
- 3 slots available for optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Built-in H/V delay, underscan, blue only, mono and 3 color tally functions
- Aspect ratio 4:3 and 16:9 switchable
- 4:3 area marker
- Parallel control capability
- Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket
- 3 alternative power sources available: supplied AC power adaptor, external DC 12 V and optional battery pack



\* 7 5/8 inches (4:3)/7 1/8 inches (16:9) viewable area, measured diagonally.

### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
MB-519 Mounting Panel  
MB-520 Mounting Bracket  
VF-508 Monitor ENG Kit  
RCC-G Cables 9-pin/9-pin Cable  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack

### Specifications

#### General

Signal format:  
15.625 to 45 kHz

Type:  
Display unit

Power requirements:  
100 to 240 V AC  $\pm 10\%$ , 50/60 Hz

Power consumption:  
60 W (with options: max. 85 W)

Dimensions\*1:  
217 (W) x 174 (H) x 364.5 (438)\*2 (D) mm  
(8 5/8 x 6 7/8 x 14 3/8 (17 1/4) inches)

Mass:  
Approx. 8.1 kg (17 lb 13 oz) (with AC adaptor:  
8.9 kg (19 lb 9 oz))

CRT

CRT type:  
9-inch HR Trinitron

AG pitch:  
0.25 mm, 70° deflection,  $\phi 21.6$  mm in-line gun

Phosphor:  
P-22

### Effective picture size

16:9:  
155.4 (W) x 87.4 (H) mm, 178 mm  
(diagonal)  
(6 1/8 x 3 1/2 inches, 7 1/8 inches)

4:3:  
155.4 (W) x 115 (H) mm, 190.7 mm  
(diagonal)  
(6 1/8 x 4 5/8 inches, 7 5/8 inches)

### Inputs/outputs

Video:

Loop-through BNC, automatic 75  $\Omega$  termination

GBR:

1.0 Vp-p  $\pm 6$  dB, positive

Y:

1.0 Vp-p  $\pm 6$  dB, high impedance

PB/PR:

0.7 Vp-p  $\pm 6$  dB, high impedance

External sync:

Loop-through BNC, automatic 75  $\Omega$  termination

Composite:

0.3 to 8.0 Vp-p, high impedance, tri-level bipolar sync

Remote

Option:

RS-232C for BKM-11R, Mini DIN 8-pin

Control unit:

D-sub 9-pin (RS-485/422 switchable)

Remote 1/Serial remote:

RS-485 serial interface, D-sub 9-pin, with loop-through

Remote 2/Parallel remote 1:

D-sub 9-pin (Short to ground)

Parallel remote 2:

Modular connector 6-pin

ISR:

Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>

Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>

Frequency response:  
48 Hz to 17 MHz +0 dB/-3 dB

DC restoration:  
Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

### Raster and picture performance

Normal scan:  
5% overscan of the effective picture area

Underscan:  
3% underscan of the effective picture area

Linearity:  
Less than 2% within circle centered on the screen with a diameter equal to the vertical height

Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)

Convergence:  
Less than 0.4 mm within circle centered on the screen with a diameter equal to the vertical height, 0.7 mm at any other point

Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100% white signal is input)

Raster size stability:  
1% of picture height (at 120 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)

### Scan delay:

Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field

### Center resolution:

4:3: 450 TV lines, 16:9: 340 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86 °F)

### Storage temperature:

-10 to 40 °C (14 to 104 °F)

### Humidity:

0 to 90% (no condensation)

### Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN 55103-2+EN 60950

\*1 Including all protruding parts. \*2 Depth with AC adaptor.

## Monitors

# BVM-D9H1E Color Video Monitor

### Features

●9-inch\* digital color picture monitor ●Modular design with optional separate control unit ●HR Trinitron CRT displays a high resolution of 450/340 TV lines (4:3/16:9 modes) ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket ●3 alternative power sources available: supplied AC power adaptor, external DC 12 V and optional battery pack

\* 7 5/8 inches (4:3)/7 1/8 inches (16:9) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
MB-519 Mounting Panel  
MB-520 Mounting Bracket  
VF-508 Monitor ENG Kit  
RCC-G Cables 9-pin/9-pin Cable  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Display unit  
Power requirements:  
100 to 240 V AC  $\pm 10\%$ , 50/60 Hz  
Power consumption:  
60 W (with options: max. 85 W)  
Dimensions\*1:  
217 (W) x 174 (H) x 364.5 (438)\*2 (D) mm  
(8 5/8 x 6 7/8 x 14 3/8 (17 1/4) inches)  
Mass:  
Approx. 8.1 kg (17 lb 13 oz) (with AC adaptor:  
8.9 kg (19 lb 9 oz))  
CRT  
CRT type:  
9-inch HR Trinitron  
AG pitch:  
0.25 mm, 70° deflection,  $\phi 21.6$  mm in-line  
gun  
Phosphor:  
P-22

### Effective picture size

16:9:  
155.4 (W) x 87.4 (H) mm, 178 mm  
(diagonal)  
(6 1/8 x 3 1/2 inches, 7 1/8 inches)  
4:3:  
155.4 (W) x 115 (H) mm, 190.7 mm  
(diagonal)  
(6 1/8 x 4 5/8 inches, 7 5/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm 6$  dB, positive  
Y:  
1.0 Vp-p  $\pm 6$  dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm 6$  dB, high impedance  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level  
bipolar sync  
Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
D-sub 9-pin (RS-485/422 switchable)  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with  
loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 17 MHz +0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1%  
of peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

### Raster and picture performance

Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 2% within circle centered on the  
screen with a diameter equal to the vertical  
height  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the  
screen with a diameter equal to the vertical  
height, 0.7 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100%  
white signal is input)  
Raster size stability:  
1% of picture height (at 120 cd/m<sup>2</sup> peak  
luminescence, 10 to 90% APL)  
Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 450 TV lines, 16:9: 340 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to  
86 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)

### Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN  
55103-2+EN 60950

\*1 Including all protruding parts. \*2 Depth with AC  
adaptor.

## Monitors

# BVM-D9H1U Color Video Monitor

### Features

●9-inch\* digital color picture monitor ●Modular design with optional separate control unit ●HR Trinitron CRT displays a high resolution of 450/340 TV lines (4:3/16:9 modes) ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel control and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket ●3 alternative power sources available: supplied AC power adaptor, external DC 12 V and optional battery pack

\* 7 5/8 inches (4:3)/7 1/8 inches (16:9) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-10R Monitor Control Unit  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
MB-519 Mounting Panel  
MB-520 Mounting Bracket  
VF-508 Monitor ENG Kit  
RCC-G Cables 9-pin/9-pin Cable  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Display unit  
Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz  
Power consumption:  
60 W (with options: max. 85 W)  
Dimensions\*1:  
217 (W) x 174 (H) x 364.5 (438)\*2 (D) mm  
(8 5/8 x 6 7/8 x 14 3/8 (17 1/4) inches)  
Mass:  
Approx. 8.1 kg (17 lb 13 oz) (with AC adaptor:  
8.9 kg (19 lb 9 oz))  
CRT  
CRT type:  
9-inch HR Trinitron  
AG pitch:  
0.25 mm, 70° deflection,  $\phi$ 21.6 mm in-line  
gun  
Phosphor:  
P-22

### Effective picture size

16:9:  
155.4 (W) x 87.4 (H) mm, 178 mm  
(diagonal)  
(6 1/8 x 3 1/2 inches, 7 1/8 inches)  
4:3:  
155.4 (W) x 115 (H) mm, 190.7 mm  
(diagonal)  
(6 1/8 x 4 5/8 inches, 7 5/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive  
Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level  
bipolar sync  
Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
D-sub 9-pin (RS-485/422 switchable)  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with  
loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 17 MHz  $\pm$ 0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1%  
of peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

### Raster and picture performance

Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 2% within circle centered on the  
screen with a diameter equal to the vertical  
height  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the  
screen with a diameter equal to the vertical  
height, 0.7 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100%  
white signal is input)  
Raster size stability:  
1% of picture height (at 120 cd/m<sup>2</sup> peak  
luminescence, 10 to 90% APL)

Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 450 TV lines, 16:9: 340 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to  
86 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)

### Regulation compliance

UL 1950/CSA 950 (cUL listed), FCC  
Class-A/IC Class-A, DHHS/DNHW

\*1 Including all protruding parts. \*2 Depth with AC  
adaptor.

## Monitors

# BVM-D9H5A Color Video Monitor

### Features

●9-inch\* digital color picture monitor ●Stand-alone design with integral control unit and simple stand ●HR Trinitron CRT provides a high resolution of 450/340 TV lines (4:3/16:9 modes) ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket ●Audio capability and built-in speaker ●3 alternative power sources available: supplied AC power adaptor, external DC 12 V and optional battery pack

\* 7 5/8 inches (4:3)/7 1/8 inches (16:9) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
MB-509 Mounting Panel  
MB-520 Mounting Bracket  
VF-508 Monitor ENG Kit  
RCC-G Cables 9-pin/9-pin Cable  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Stand-alone monitor  
Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz  
Power consumption:  
60 W (with options: max. 85 W)  
Dimensions\*1:  
218 (W) x 217 (H) x 379.5 (453)\*2 (D) mm  
(8 5/8 x 8 5/8 x 15 (17 7/8) inches)  
Mass:  
Approx. 9.3 kg (20 lb 7 oz) (with AC adaptor:  
10.1 kg (22 lb 4 oz))  
CRT  
CRT type:  
9-inch HR Trinitron  
AG pitch:  
0.25 mm, 70° deflection,  $\phi$ 21.6 mm in-line gun  
Phosphor:  
P-22

### Effective picture size

16:9:  
155.4 (W) x 87.4 (H) mm, 178 mm (diagonal)  
(6 1/8 x 3 1/2 inches, 7 1/8 inches)  
4:3:  
155.4 (W) x 115 (H) mm, 190.7 mm (diagonal)  
(6 1/8 x 4 5/8 inches, 7 5/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive  
Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level  
bipolar sync

### Remote

Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
Not applicable  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with  
loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 17 MHz +0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1% of  
peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

### Raster and picture performance

Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 2% within circle centered on the  
screen with a diameter equal to the vertical  
height  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the  
screen with a diameter equal to the vertical  
height, 0.7 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100% white  
signal is input)  
Raster size stability:  
1% of picture height (at 120 cd/m<sup>2</sup> peak  
luminescence, 10 to 90% APL)  
Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 450 TV lines, 16:9: 340 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86  
°F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)

### Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN  
55103-2+EN 60950

\*1 Including all protruding parts. \*2 Depth with AC  
adaptor.

## Monitors

# BVM-D9H5E Color Video Monitor

### Features

●9-inch\* digital color picture monitor ●Stand-alone design with integral control unit and simple stand ●HR Trinitron CRT provides a high resolution of 450/340 TV lines (4:3/16:9 modes) ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket ●Audio capability and built-in speaker ●3 alternative power sources available: supplied AC power adaptor, external DC 12 V and optional battery pack

\* 7 5/8 inches (4:3)/7 1/8 inches (16:9) viewable area, measured diagonally.



### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
MB-509 Mounting Panel  
MB-520 Mounting Bracket  
VF-508 Monitor ENG Kit  
RCC-G Cables 9-pin/9-pin Cable  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack

### Specifications

#### General

Signal format:  
15.625 to 45 kHz  
Type:  
Stand-alone monitor  
Power requirements:  
100 to 240 V AC  $\pm$ 10%, 50/60 Hz  
Power consumption:  
60 W (with options: max. 85 W)  
Dimensions\*1:  
218 (W) x 217 (H) x 379.5 (453)\*2 (D) mm  
(8 5/8 x 8 5/8 x 15 (17 7/8) inches)  
Mass:  
Approx. 9.3 kg (20 lb 7 oz) (with AC adaptor:  
10.1 kg (22 lb 4 oz))  
CRT  
CRT type:  
9-inch HR Trinitron  
AG pitch:  
0.25 mm, 70° deflection,  $\phi$ 21.6 mm in-line gun  
Phosphor:  
P-22

### Effective picture size

16:9:  
155.4 (W) x 87.4 (H) mm, 178 mm (diagonal)  
(6 1/8 x 3 1/2 inches, 7 1/8 inches)  
4:3:  
155.4 (W) x 115 (H) mm, 190.7 mm (diagonal)  
(6 1/8 x 4 5/8 inches, 7 5/8 inches)

### Inputs/outputs

Video:  
Loop-through BNC, automatic 75  $\Omega$  termination  
GBR:  
1.0 Vp-p  $\pm$ 6 dB, positive  
Y:  
1.0 Vp-p  $\pm$ 6 dB, high impedance  
PB/PR:  
0.7 Vp-p  $\pm$ 6 dB, high impedance  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
Composite:  
0.3 to 8.0 Vp-p, high impedance, tri-level  
bipolar sync  
Remote  
Option:  
RS-232C for BKM-11R, Mini DIN 8-pin  
Control unit:  
Not applicable  
Remote 1/Serial remote:  
RS-485 serial interface, D-sub 9-pin, with  
loop-through  
Remote 2/Parallel remote 1:  
D-sub 9-pin (Short to ground)  
Parallel remote 2:  
Modular connector 6-pin  
ISR:  
Not applicable

### Video signal performance

Differential gain (DG):  
Within 5% for luminance from 0 to 100 cd/m<sup>2</sup>  
Differential phase (DP):  
Within 5° for luminance from 0 to 100 cd/m<sup>2</sup>  
Frequency response:  
48 Hz to 17 MHz +0 dB/-3 dB  
DC restoration:  
Back porch type, back porch level: within 1% of  
peak luminance, 10 to 90% APL

### Synchronization

Retrace time:  
Horizontal: under 3.77  $\mu$ s  
Vertical: under 650  $\mu$ s

### Raster and picture performance

Normal scan:  
5% overscan of the effective picture area  
Underscan:  
3% underscan of the effective picture area  
Linearity:  
Less than 2% within circle centered on the  
screen with a diameter equal to the vertical  
height  
Color temperature:  
D65/D93/COL 1/COL 2 (User adjustable)  
Convergence:  
Less than 0.4 mm within circle centered on the  
screen with a diameter equal to the vertical  
height, 0.7 mm at any other point  
Preset brightness:  
120 cd/m<sup>2</sup> (35 fL) (when a 1.0 Vp-p 100% white  
signal is input)  
Raster size stability:  
1% of picture height (at 120 cd/m<sup>2</sup> peak  
luminescence, 10 to 90% APL)  
Scan delay:  
Horizontal: approx. 1/4 line  
Vertical: approx. 1/2 field  
Center resolution:  
4:3: 450 TV lines, 16:9: 340 TV lines

### Operating conditions

Operating temperature:  
0 to 35 °C (32 to 95°F)  
Optimum operating range 20 to 30 °C (68 to 86  
°F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)

### Regulation compliance

EN 60950 (TUV GS), CE: EN 55103-1+EN  
55103-2+EN 60950

\*1 Including all protruding parts. \*2 Depth with AC  
adaptor.

## Monitors

# BVM-D9H5U Color Video Monitor

### Features

●9-inch\* digital color picture monitor ●Stand-alone design with integral control unit and simple stand ●HR Trinitron CRT provides a high resolution of 450/340 TV lines (4:3/16:9 modes) ●Beam current feedback circuit for stable color reproduction ●Signals with the frequency range of 15.625 to 45 kHz and DTV signals acceptable ●Component (YPBPR/GBR) input available as standard ●3 slots available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket ●Audio capability and built-in speaker ●3 alternative power sources available: supplied AC power adaptor, external DC 12 V and optional battery pack

\* 7 5/8 inches (4:3)/7 1/8 inches (16:9) viewable area, measured diagonally.



### Applicable Models

HDW-730S HDCAM Camcorder  
HDW-750 HDCAM Camcorder  
HDW-750P HDCAM Camcorder

### Supplied Accessories

4:3 Mask (1)  
AC Cable (1)  
AC Plug Holder (1)  
Tally Label (1)  
Operation Manual (1)

### Optional Accessories

BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-127W NTSC/PAL Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-11R Monitor Control Unit  
BKM-14L Auto Setup Probe  
MB-509 Mounting Panel  
MB-520 Mounting Bracket  
VF-508 Monitor ENG Kit  
RCC-G Cables 9-pin/9-pin Cable  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack

### Specifications

#### General

##### Signal format:

15.625 to 45 kHz

##### Type:

Stand-alone monitor

##### Power requirements:

100 to 240 V AC  $\pm 10\%$ , 50/60 Hz

##### Power consumption:

60 W (with options: max. 85 W)

##### Dimensions\*1:

218 (W) x 217 (H) x 379.5 (453)\*2 (D) mm  
(8 5/8 x 8 5/8 x 15 (17 7/8) inches)

##### Mass:

Approx. 9.3 kg (20 lb 7 oz) (with AC adaptor:  
10.1 kg (22 lb 4 oz))

##### CRT

##### CRT type:

9-inch HR Trinitron

##### AG pitch:

0.25 mm, 70° deflection,  $\phi 21.6$  mm in-line gun

##### Phosphor:

P-22

##### Effective picture size

16:9:

155.4 (W) x 87.4 (H) mm, 178 mm (diagonal)  
(6 1/8 x 3 1/2 inches, 7 1/8 inches)

4:3:

155.4 (W) x 115 (H) mm, 190.7 mm (diagonal)  
(6 1/8 x 4 5/8 inches, 7 5/8 inches)

### Inputs/outputs

#### Video:

Loop-through BNC, automatic 75  $\Omega$  termination

#### GBR:

1.0 Vp-p  $\pm 6$  dB, positive

#### Y:

1.0 Vp-p  $\pm 6$  dB, high impedance

#### PB/PR:

0.7 Vp-p  $\pm 6$  dB, high impedance

#### External sync:

Loop-through BNC, automatic 75  $\Omega$  termination

#### Composite:

0.3 to 8.0 Vp-p, high impedance, tri-level  
bipolar sync

#### Remote

##### Option:

RS-232C for BKM-11R, Mini DIN 8-pin

##### Control unit:

Not applicable

##### Remote 1/Serial remote:

RS-485 serial interface, D-sub 9-pin, with  
loop-through

##### Remote 2/Parallel remote 1:

D-sub 9-pin (Short to ground)

##### Parallel remote 2:

Modular connector 6-pin

##### ISR:

Not applicable

### Video signal performance

#### Differential gain (DG):

Within 5% for luminance from 0 to 100 cd/m2

#### Differential phase (DP):

Within 5° for luminance from 0 to 100 cd/m2

#### Frequency response:

48 Hz to 17 MHz +0 dB/-3 dB

#### DC restoration:

Back porch type, back porch level: within 1% of  
peak luminance, 10 to 90% APL

### Synchronization

#### Retrace time:

Horizontal: under 3.77  $\mu$ s

Vertical: under 650  $\mu$ s

### Raster and picture performance

#### Normal scan:

5% overscan of the effective picture area

#### Underscan:

3% underscan of the effective picture area

#### Linearity:

Less than 2% within circle centered on the  
screen with a diameter equal to the vertical  
height

#### Color temperature:

D65/D93/COL 1/COL 2 (User adjustable)

#### Convergence:

Less than 0.4 mm within circle centered on the  
screen with a diameter equal to the vertical  
height, 0.7 mm at any other point

#### Preset brightness:

120 cd/m2 (35 fL) (when a 1.0 Vp-p 100% white  
signal is input)

#### Raster size stability:

1% of picture height (at 120 cd/m2 peak  
luminescence, 10 to 90% APL)

#### Scan delay:

Horizontal: Approx. 1/4 line

Vertical: Approx. 1/2 field

#### Center resolution:

4:3: 450 TV lines, 16:9: 340 TV lines

### Operating conditions

#### Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86  
°F)

#### Storage temperature:

-10 to 40 °C (14 to 104 °F)

#### Humidity:

0 to 90% (no condensation)

### Regulation compliance

UL 1950/CSA 950 (cUL listed), FCC Class-A/IC  
Class-A, DHHS/DNHW

\*1 Including all protruding parts. \*2 Depth with AC  
adaptor.

## Monitors

# BVM-20F1E Color Video Monitor

### Features

- 20-inch\* color video monitor
- Modular design with optional separate control unit
- HR Trinitron CRT provides high resolution of 900 TV lines
- EBU standard phosphors
- Beam current feedback circuit for stable color reproduction
- RGB/component (Y/R-Y/B-Y) input available as standard
- 4 slots available for accepting composite, Y/C, RGB, component and SDI signals with the optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Aspect ratio 4:3 and 16:9 switchable
- Optional 16:9 bezel
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Mountable into a 19-inch EIA standard rack with the optional rack mount kit
- Supported by Sony Interactive Status Reporting (ISR)

\* 19 inches viewable area, measured diagonally.



### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
 BKM-21D SDI Multi Decoder Adaptor  
 BKM-22X SDI Multi Input Expansion Adaptor  
 BKM-24N NTSC Decoder Adaptor  
 BKM-25P PAL Decoder Adaptor  
 BKM-26M PAL-M Decoder Adaptor  
 BKM-27T Tri-standard Decoder Adaptor  
 BKM-28X Analog Input Expansion Adaptor  
 BKM-48X HD Analog Input Expansion Adaptor  
 BKM-10R Monitor Control Unit  
 BKM-11R Monitor Control Unit  
 BKM-12Y Memory Card  
 BKM-14L Auto Setup Probe  
 BKM-32H Control Unit Attachment Kit  
 BKM-33H20 16:9 Mask  
 BKM-30E20 Rack Mount Kit  
 MB-510 Mounting Attachment  
 RCC-G Cables 9-pin/9-pin Cable

\*BKM-12Y is utilized with BKM-10R/11R.  
 \*\*MB-510 is utilized with BKM-10R.

### Specifications

#### General

##### System:

625 lines 50 fields or 525 lines 60 fields interlace

##### Power requirements:

AC 100 to 120 V/220 to 240 V, 2.0/1.0A, 50/60 Hz

##### Power consumption:

Max. 200 W (with options)

##### Dimensions:

444 (W) x 414 (H) x 570 (D) mm  
 (17 1/2 x 16 3/8 x 22 1/2 inches)

##### Mass:

Approx. 37 kg (81 lb 9 oz)

##### CRT

##### CRT type:

20-inch HR Trinitron

##### AG pitch:

0.30 mm, 90° deflection,  $\phi$ 30.6 mm in-line gun

##### Phosphor:

EBU

##### Effective picture size:

386 (W) x 291 (H) mm, 482 mm (diagonal)  
 (15 1/4 x 11 1/2 inches, 19 inches)

##### Color temperature:

D65/D93/adjustable to other color temperature

##### Preset brightness:

100 cd/m<sup>2</sup> (when a 1.0 Vp-p 100% white signal is input)

##### Resolution:

900 TV lines

##### Inputs/outputs

##### Video:

Loop-through BNC

##### RGB

R/B: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance

G: 1.0 Vp-p  $\pm$ 6 dB, sync negative, high impedance

##### Analog component

Y: 1.0 Vp-p  $\pm$ 6 dB, positive, high impedance

R-Y/B-Y: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance

##### External sync:

Loop-through BNC

##### Composite:

0.3 to 8.0 Vp-p negative, high impedance

##### Return loss:

More than 46 dB (7 MHz when 75  $\Omega$  terminated)

##### Remote

##### Remote 1:

Loop-through D-sub 9-pin (RS-485 serial interface)

##### Remote 2:

D-sub 9-pin (option: Mini-DIN 8-pin)

##### ISR:

D-sub 9-pin

##### Video signal performance

##### Differential gain:

Within 2% for luminance from 0 to 100 cd/m<sup>2</sup>

##### Differential phase:

Within 2° for luminance from 0 to 100 cd/m<sup>2</sup>

##### Frequency response:

50 Hz to 10 MHz  $\pm$ 1 dB

##### DC restoration:

Back porch type, Back level fluctuation, within 1% for 10 to 90% APL input signal variation

##### Synchronization

##### AFC time:

Fast mode: 0.5 ms

Normal mode: 2 ms

##### Horizontal hold:

Greater than  $\pm$ 500 Hz (when AFC 0.5 ms)

##### Retrace time:

Horizontal: within 10  $\mu$ s

Vertical: within 1 ms (normal), within 0.8 ms (underscan)

##### Raster and picture performance

##### Normal scan:

5% overscan of the effective picture area

##### Underscan:

3% underscan of the effective picture area

##### Linearity:

Less than 0.5% within a central area bounded by a circle, 1% at any other point

##### Convergence:

Less than 0.4 mm within a central area bounded by a circle, 0.7 mm at any other point

##### Raster size stability:

Less than 1% of picture height (at 100 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)

##### Operating conditions

##### Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86 °F)

##### Humidity:

0 to 90% (no condensation)

##### Altitude:

Approx. 3,050 m (10,000 ft)

## Monitors

# BVM-20F1U Color Video Monitor

### Features

- 20-inch\* color video monitor
- Modular design with optional separate control unit
- HR Trinitron CRT provides high resolution of 900 TV lines
- SMPTE-C standard phosphors
- Beam current feedback circuit for stable color reproduction
- RGB/component (Y/R-Y/B-Y) input available as standard
- 4 slots available for accepting composite, Y/C, RGB, component and SDI signals with the optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Aspect ratio 4:3 and 16:9 switchable
- Optional 16:9 bezel
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Mountable into a 19-inch EIA standard rack with the optional rack mount kit
- Supported by Sony Interactive Status Reporting (ISR)

\* 19 inches viewable area, measured diagonally.



### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
 BKM-21D SDI Multi Decoder Adaptor  
 BKM-22X SDI Multi Input Expansion Adaptor  
 BKM-24N NTSC Decoder Adaptor  
 BKM-25P PAL Decoder Adaptor  
 BKM-26M PAL-M Decoder Adaptor  
 BKM-27T Tri-standard Decoder Adaptor  
 BKM-28X Analog Input Expansion Adaptor  
 BKM-48X HD Analog Input Expansion Adaptor  
 BKM-10R Monitor Control Unit  
 BKM-11R Monitor Control Unit  
 BKM-12Y Memory Card  
 BKM-14L Auto Setup Probe  
 BKM-32H Control Unit Attachment Kit  
 BKM-33H20 16:9 Mask  
 BKM-30E20 Rack Mount Kit  
 MB-510 Mounting Attachment  
 RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R. \*\* MB-510 is utilized with BKM-10R.

### Specifications

#### General

##### System:

625 lines 50 fields or 525 lines 60 fields interlace

##### Power requirements:

AC 100 to 120 V/220 to 240 V, 2.0/1.0A, 50/60 Hz

##### Power consumption:

Max. 200 W (with options)

##### Dimensions:

444 (W) x 414 (H) x 570 (D) mm  
 (17 1/2 x 16 3/8 x 22 1/2 inches)

##### Mass:

Approx. 37 kg (81 lb 9 oz)

##### CRT

##### CRT type:

20-inch HR Trinitron

##### AG pitch:

0.30 mm, 90° deflection,  $\phi$ 30.6 mm in-line gun

##### Phosphor:

SMPTE-C

##### Effective picture size:

386 (W) x 291 (H) mm, 482 mm (diagonal)  
 (15 1/4 x 11 1/2 inches, 19 inches)

##### Color temperature:

D65/D93/adjustable to other color temperature

##### Preset brightness:

100 cd/m<sup>2</sup> (when a 1.0 Vp-p 100% white signal is input)

##### Resolution:

900 TV lines

##### Inputs/outputs

##### Video:

Loop-through BNC

##### RGB

R/B: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance

G: 1.0 Vp-p  $\pm$ 6 dB, sync negative, high impedance

##### Analog component

Y: 1.0 Vp-p  $\pm$ 6 dB, positive, high impedance

R-Y/B-Y: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance

##### External sync:

Loop-through BNC

##### Composite:

0.3 to 8.0 Vp-p negative, high impedance

##### Return loss:

More than 46 dB (7 MHz when 75  $\Omega$  terminated)

##### Remote

##### Remote 1:

Loop-through D-sub 9-pin (RS-485 serial interface)

##### Remote 2:

D-sub 9-pin (option: Mini-DIN 8-pin)

##### ISR:

D-sub 9-pin

##### Video signal performance

##### Differential gain:

Within 2% for luminance from 0 to 100 cd/m<sup>2</sup>

##### Differential phase:

Within 2° for luminance from 0 to 100 cd/m<sup>2</sup>

##### Frequency response:

50 Hz to 10 MHz  $\pm$ 1 dB

##### DC restoration:

Back porch type, Back level fluctuation, within 1% for 10 to 90% APL input signal variation

##### Synchronization

##### AFC time:

Fast mode: 0.5 ms

Normal mode: 2 ms

##### Horizontal hold:

Greater than  $\pm$ 500 Hz (when AFC 0.5 ms)

##### Retrace time:

Horizontal: within 10  $\mu$ s

Vertical: within 1 ms (normal), within 0.8 ms (underscan)

##### Raster and picture performance

##### Normal scan:

5% overscan of the effective picture area

##### Underscan:

3% underscan of the effective picture area

##### Linearity:

Less than 0.5% within a central area bounded by a circle, 1% at any other point

##### Convergence:

Less than 0.4 mm within a central area bounded by a circle, 0.7 mm at any other point

##### Raster size stability:

Less than 1% of picture height (at 100 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)

##### Operating conditions

##### Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86 °F)

##### Humidity:

0 to 90% (no condensation)

##### Altitude:

Approx. 3,050 m (10,000 ft)

## Monitors

# BVM-14F1E Color Video Monitor

### Features

- 14-inch\* color video monitor
- Modular design with optional separate control unit
- HR Trinitron CRT provides high resolution of 800 TV lines
- EBU standard phosphors
- Beam current feedback circuit for stable color reproduction
- RGB/component (Y/R-Y/B-Y) input available as standard
- 2 slots available for accepting composite, Y/C, RGB, component and SDI signals with the optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Aspect ratio 4:3 and 16:9 switchable
- Optional 16:9 bezel
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Mountable into a 19-inch EIA standard rack with the optional rack mount kit
- Supported by Sony Interactive Status Reporting (ISR)



\* 13 1/8 inches viewable area, measured diagonally.

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
 BKM-21D SDI Multi Decoder Adaptor  
 BKM-22X SDI Multi Input Expansion Adaptor  
 BKM-24N NTSC Decoder Adaptor  
 BKM-25P PAL Decoder Adaptor  
 BKM-26M PAL-M Decoder Adaptor  
 BKM-27T Tri-standard Decoder Adaptor  
 BKM-28X Analog Input Expansion Adaptor  
 BKM-48X HD Analog Input Expansion Adaptor  
 BKM-10R Monitor Control Unit  
 BKM-11R Monitor Control Unit  
 BKM-12Y Memory Card  
 BKM-14L Auto Setup Probe  
 BKM-33H14 16:9 Mask  
 BKM-31E14 Rack Mount Kit  
 MB-510 Mounting Attachment  
 RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R. \*\* MB-510 is utilized with BKM-10R.

### Specifications

#### General

14-inch HR Trinitron  
 0.25 mm, 90° deflection,  $\phi$ 29.4 mm in-line gun  
 EBU  
 268 (W) x 201 (H) mm, 332 mm (diagonal)  
 (10 5/8 x 8 inches, 13 1/8 inches)  
 D65/D93/adjustable to other color temperature  
 100 cd/m<sup>2</sup> (when a 1.0 Vp-p 100% white signal is input)  
 R/B: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance  
 G: 1.0 Vp-p  $\pm$ 6 dB, sync negative, high impedance  
 Analog component  
 Y: 1.0 Vp-p  $\pm$ 6 dB, positive, high impedance  
 R-Y/B-Y: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance  
 External sync:  
 Loop-through BNC  
 Composite:  
 0.3 to 8.0 Vp-p negative, high impedance  
 Return loss:  
 More than 46 dB (7 MHz when 75  $\Omega$  terminated)  
 Remote  
 Remote 1:  
 Loop-through D-sub 9-pin (RS-485 serial interface)

#### Remote 2:

D-sub 9-pin (option: Mini-DIN 8-pin)

#### ISR:

D-sub 9-pin

#### Video signal performance

##### Differential gain:

Within 2% for luminance from 0 to 100 cd/m<sup>2</sup>

##### Differential phase:

Within 2° for luminance from 0 to 100 cd/m<sup>2</sup>

##### Frequency response:

50 Hz to 10 MHz  $\pm$ 1 dB

##### DC restoration:

Back porch type, Back level fluctuation, within 1% for 10 to 90% APL input signal variation

#### Synchronization

##### AFC time:

Fast mode: 0.5 ms

Normal mode: 2 ms

##### Horizontal hold:

Greater than  $\pm$ 500 Hz (when AFC 0.5 ms)

##### Retrace time:

Horizontal: within 10  $\mu$ s

Vertical: within 1 ms (normal), within 0.8 ms (underscan)

#### Raster and picture performance

##### Normal scan:

5% overscan of the effective picture area

##### Underscan:

3% underscan of the effective picture area

##### Linearity:

Less than 0.5% within a central area bounded by a circle, 1% at any other point

##### Convergence:

Less than 0.3 mm within a central area bounded by a circle, 0.6 mm at any other point

##### Raster size stability:

Less than 1% of picture height (at 100 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)

#### Operating conditions

##### Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86 °F)

##### Humidity:

0 to 90% (no condensation)

##### Altitude:

Approx. 3,050 m (10,000 ft)

## Monitors

# BVM-14F1U Color Video Monitor

### Features

- 14-inch\* color video monitor
- Modular design with optional separate control unit
- HR Trinitron CRT provides high resolution of 800 TV lines
- SMPTE-C standard phosphors
- Beam current feedback circuit for stable color reproduction
- RGB/component (Y/R-Y/B-Y) input available as standard
- 2 slots available for accepting composite, Y/C, RGB, component and SDI signals with the optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Aspect ratio 4:3 and 16:9 switchable
- Optional 16:9 bezel
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Mountable into a 19-inch EIA standard rack with the optional rack mount kit
- Supported by Sony Interactive Status Reporting (ISR)



\* 13 1/8 inches viewable area, measured diagonally.

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
 BKM-21D SDI Multi Decoder Adaptor  
 BKM-22X SDI Multi Input Expansion Adaptor  
 BKM-24N NTSC Decoder Adaptor  
 BKM-25P PAL Decoder Adaptor  
 BKM-26M PAL-M Decoder Adaptor  
 BKM-27T Tri-standard Decoder Adaptor  
 BKM-28X Analog Input Expansion Adaptor  
 BKM-48X HD Analog Input Expansion Adaptor  
 BKM-10R Monitor Control Unit  
 BKM-11R Monitor Control Unit  
 BKM-12Y Memory Card  
 BKM-14L Auto Setup Probe  
 BKM-33H14 16:9 Mask  
 BKM-31E14 Rack Mount Kit  
 MB-510 Mounting Attachment  
 RCC-G Cables 9-pin/9-pin Cable

\* BKM-12Y is utilized with BKM-10R/11R. \*\* MB-510 is utilized with BKM-10R.

### Specifications

#### General

14-inch HR Trinitron  
 0.25 mm, 90° deflection,  $\phi$ 29.4 mm in-line gun  
 SMPTE-C  
 268 (W) x 201 (H) mm, 332 mm (diagonal)  
 (10 5/8 x 8 inches, 13 1/8 inches)  
 D65/D93/adjustable to other color temperature  
 100 cd/m<sup>2</sup> (when a 1.0 Vp-p 100% white signal is input)  
 R/B: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance  
 G: 1.0 Vp-p  $\pm$ 6 dB, sync negative, high impedance  
 Analog component  
 Y: 1.0 Vp-p  $\pm$ 6 dB, positive, high impedance  
 R-Y/B-Y: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance  
 External sync:  
 Loop-through BNC  
 Composite:  
 0.3 to 8.0 Vp-p negative, high impedance  
 Return loss:  
 More than 46 dB (7 MHz when 75  $\Omega$  terminated)  
 Remote  
 Remote 1:  
 Loop-through D-sub 9-pin (RS-485 serial interface)

#### Remote 2:

D-sub 9-pin (option: Mini-DIN 8-pin)

#### ISR:

D-sub 9-pin

#### Video signal performance

##### Differential gain:

Within 2% for luminance from 0 to 100 cd/m<sup>2</sup>

##### Differential phase:

Within 2° for luminance from 0 to 100 cd/m<sup>2</sup>

##### Frequency response:

50 Hz to 10 MHz  $\pm$ 1 dB

##### DC restoration:

Back porch type, Back level fluctuation, within 1% for 10 to 90% APL input signal variation

#### Synchronization

##### AFC time:

Fast mode: 0.5 ms

Normal mode: 2 ms

##### Horizontal hold:

Greater than  $\pm$ 500 Hz (when AFC 0.5 ms)

##### Retrace time:

Horizontal: within 10  $\mu$ s

Vertical: within 1 ms (normal), within 0.8 ms (underscan)

#### Raster and picture performance

##### Normal scan:

5% overscan of the effective picture area

##### Underscan:

3% underscan of the effective picture area

##### Linearity:

Less than 0.5% within a central area bounded by a circle, 1% at any other point

##### Convergence:

Less than 0.3 mm within a central area bounded by a circle, 0.6 mm at any other point

##### Raster size stability:

Less than 1% of picture height (at 100 cd/m<sup>2</sup> peak luminescence, 10 to 90% APL)

#### Operating conditions

##### Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86 °F)

##### Humidity:

0 to 90% (no condensation)

##### Altitude:

Approx. 3,050 m (10,000 ft)

## Monitors

# BVM-14F5E Color Video Monitor

### Features

- 14-inch\* color video monitor
- Stand-alone design with integral control unit
- HR Trinitron CRT provides high resolution of 800 TV lines
- EBU standard phosphors
- Beam current feedback circuit for stable color reproduction
- RGB/component (Y/R-Y/B-Y) input available as standard
- 4 slots available for accepting composite, Y/C, RGB, component and SDI signals with the optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Aspect ratio 4:3 and 16:9 switchable
- Optional 16:9 bezel
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Mountable into a 19-inch EIA standard rack with the optional rack mount kit
- Supported by Sony Interactive Status Reporting (ISR)

\* 13 1/8 inches viewable area, measured diagonally.

### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
 BKM-21D SDI Multi Decoder Adaptor  
 BKM-22X SDI Multi Input Expansion Adaptor  
 BKM-24N NTSC Decoder Adaptor  
 BKM-25P PAL Decoder Adaptor  
 BKM-26M PAL-M Decoder Adaptor  
 BKM-27T Tri-standard Decoder Adaptor  
 BKM-28X Analog Input Expansion Adaptor  
 BKM-48X HD Analog Input Expansion Adaptor  
 BKM-11R Monitor Control Unit  
 BKM-12Y Memory Card  
 BKM-14L Auto Setup Probe  
 BKM-33H14 16:9 Mask  
 BKM-30E14 Rack Mount Kit  
 RCC-G Cables 9-pin/9-pin Cable

### Specifications

#### General

##### System:

625 lines 50 fields or 525 lines 60 fields interlace

##### Power requirements:

AC 100 to 120 V/220 to 240 V, 1.8/0.8A, 50/60 Hz

##### Power consumption:

Max. 175 W (with options)

##### Dimensions:

482 (W) x 280 (H) x 530 (D) mm  
 (19 x 11 1/8 x 20 7/8 inches)

##### Mass:

26 kg (57 lb)

##### CRT

##### CRT type:

14-inch HR Trinitron

##### AG pitch:

0.25 mm, 90° deflection,  $\phi$ 29.4 mm in-line gun

##### Phosphor:

EBU

##### Effective picture size:

268 (W) x 201 (H) mm, 332 mm (diagonal)  
 (10 5/8 x 8 inches, 13 1/8 inches)

##### Color temperature:

D65/D93/adjustable to other color temperature

##### Preset brightness:

100 cd/m<sup>2</sup> (when a 1.0 Vp-p 100% white signal is input)

##### Resolution:

800 TV lines

##### Inputs/outputs

##### Video:

Loop-through BNC

##### RGB

R/B: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance

G: 1.0 Vp-p  $\pm$ 6 dB, sync negative, high impedance

##### Analog component

Y: 1.0 Vp-p  $\pm$ 6 dB, positive, high impedance

R-Y/B-Y: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance

##### External sync:

Loop-through BNC

##### Composite:

0.3 to 8.0 Vp-p negative, high impedance

##### Return loss:

More than 46 dB (7 MHz when 75  $\Omega$  terminated)

##### Remote

##### Remote 1:

Loop-through D-sub 9-pin (RS-485 serial interface)

##### Remote 2:

D-sub 9-pin (option: Mini-DIN 8-pin)

##### ISR:

D-sub 9-pin

##### Video signal performance

##### Differential gain:

Within 2% for luminance from 0 to 100 cd/m<sup>2</sup>

##### Differential phase:

Within 2° for luminance from 0 to 100 cd/m<sup>2</sup>

##### Frequency response:

50 Hz to 10 MHz  $\pm$ 1 dB

##### DC restoration:

Back porch type, Back level fluctuation, within 1% for 10 to 90% APL input signal variation



### Synchronization

#### AFC time:

Fast mode: 0.5 ms

Normal mode: 2 ms

#### Horizontal hold:

Greater than  $\pm$ 500 Hz (when AFC 0.5 ms)

#### Retrace time:

Horizontal: within 10  $\mu$ s

Vertical: within 1 ms (normal), within 0.8 ms (underscan)

### Raster and picture performance

#### Normal scan:

5% overscan of the effective picture area

#### Underscan:

3% underscan of the effective picture area

#### Linearity:

Less than 0.5% within a central area bounded by a circle, 1% at any other point

#### Convergence:

Less than 0.3 mm within a central area bounded by a circle, 0.6 mm at any other point

#### Raster size stability:

Less than 1% of picture height (at 100 cd/m<sup>2</sup> peak luminance, 10 to 90% APL)

### Operating conditions

#### Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86 °F)

#### Humidity:

0 to 90% (no condensation)

#### Altitude:

Approx. 3,050 m (10,000 ft)

## Monitors

# BVM-14F5U Color Video Monitor

### Features

- 14-inch\* color video monitor
- Stand-alone design with integral control unit
- HR Trinitron CRT provides high resolution of 800 TV lines
- SMPTE-C standard phosphors
- Beam current feedback circuit for stable color reproduction
- RGB/component (Y/R-Y/B-Y) input available as standard
- 4 slots available for accepting composite, Y/C, RGB, component and SDI signals with the optional input adaptors
- Accepts external sync
- Auto setup for chroma, phase and white balance
- Precise color temperature adjustment with a color analyzer
- Aspect ratio 4:3 and 16:9 switchable
- Optional 16:9 bezel
- Parallel and serial remote control capability
- Optional memory card for storage and recall of primary setup data
- Mountable into a 19-inch EIA standard rack with the optional rack mount kit
- Supported by Sony Interactive Status Reporting (ISR)

\* 13 1/8 inches viewable area, measured diagonally.



### Optional Accessories

BKM-20D SDI 4:2:2 Decoder Adaptor  
 BKM-21D SDI Multi Decoder Adaptor  
 BKM-22X SDI Multi Input Expansion Adaptor  
 BKM-24N NTSC Decoder Adaptor  
 BKM-25P PAL Decoder Adaptor  
 BKM-26M PAL-M Decoder Adaptor  
 BKM-27T Tri-standard Decoder Adaptor  
 BKM-28X Analog Input Expansion Adaptor  
 BKM-48X HD Analog Input Expansion Adaptor  
 BKM-11R Monitor Control Unit  
 BKM-12Y Memory Card  
 BKM-14L Auto Setup Probe  
 BKM-33H14 16:9 Mask  
 BKM-30E14 Rack Mount Kit  
 RCC-G Cables 9-pin/9-pin Cable

### Specifications

#### General

##### System:

625 lines 50 fields or 525 lines 60 fields interlace

##### Power requirements:

AC 100 to 120 V/220 to 240 V, 1.8/0.8A, 50/60 Hz

##### Power consumption:

Max. 175 W (with options)

##### Dimensions:

482 (W) x 280 (H) x 530 (D) mm  
 (19 x 11 1/8 x 20 7/8 inches)

##### Mass:

26 kg (57 lb)

##### CRT

##### CRT type:

14-inch HR Trinitron

##### AG pitch:

0.25 mm, 90° deflection,  $\phi$ 29.4 mm in-line gun

##### Phosphor:

SMPTE-C

##### Effective picture size:

268 (W) x 201 (H) mm, 332 mm (diagonal)  
 (10 5/8 x 8 inches, 13 1/8 inches)

##### Color temperature:

D65/D93/adjustable to other color temperature

##### Preset brightness:

100 cd/m<sup>2</sup> (when a 1.0 Vp-p 100% white signal is input)

##### Resolution:

800 TV lines

##### Inputs/outputs

##### Video:

Loop-through BNC

RGB

R/B: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance

G: 1.0 Vp-p  $\pm$ 6 dB, sync negative, high impedance

##### Analog component

Y: 1.0 Vp-p  $\pm$ 6 dB, positive, high impedance

R-Y/B-Y: 0.7 Vp-p  $\pm$ 6 dB, positive, high impedance

##### External sync:

Loop-through BNC

##### Composite:

0.3 to 8.0 Vp-p negative, high impedance

##### Return loss:

More than 46 dB (7 MHz when 75  $\Omega$  terminated)

##### Remote

##### Remote 1:

Loop-through D-sub 9-pin (RS-485 serial interface)

##### Remote 2:

D-sub 9-pin (option: Mini-DIN 8-pin)

##### ISR:

D-sub 9-pin

##### Video signal performance

##### Differential gain:

Within 2% for luminance from 0 to 100 cd/m<sup>2</sup>

##### Differential phase:

Within 2° for luminance from 0 to 100 cd/m<sup>2</sup>

##### Frequency response:

50 Hz to 10 MHz  $\pm$ 1 dB

##### DC restoration:

Back porch type, Back level fluctuation, within 1% for 10 to 90% APL input signal variation

### Synchronization

##### AFC time:

Fast mode: 0.5 ms

Normal mode: 2 ms

##### Horizontal hold:

Greater than  $\pm$ 500 Hz (when AFC 0.5 ms)

##### Retrace time:

Horizontal: within 10  $\mu$ s

Vertical: within 1 ms (normal), within 0.8 ms (underscan)

### Raster and picture performance

##### Normal scan:

5% overscan of the effective picture area

##### Underscan:

3% underscan of the effective picture area

##### Linearity:

Less than 0.5% within a central area bounded by a circle, 1% at any other point

##### Convergence:

Less than 0.3 mm within a central area bounded by a circle, 0.6 mm at any other point

##### Raster size stability:

Less than 1% of picture height (at 100 cd/m<sup>2</sup> peak luminance, 10 to 90% APL)

### Operating conditions

##### Operating temperature:

0 to 35 °C (32 to 95°F)

Optimum operating range 20 to 30 °C (68 to 86 °F)

##### Humidity:

0 to 90% (no condensation)

##### Altitude:

Approx. 3,050 m (10,000 ft)

## Monitors

## LUMA Series Feature Comparison

	Studio Type					Handheld Type
Monitor System	LMD-322W	LMD-232W	LMD-212	LMD-172W	LMD-152	LMD-9050
	MEU-WX2	MEU-WX2	MEU-WX2	MEU-WX2	MEU-WX2	
Page	p 611	p 612	p 613	p 614	p 615	p 625
Picture Resolution	1280 x 768 dots		1024 x 768dots	1280 x 768 dots	1024 x 768 dots	1024 x 768 dots
Picture Size*	31.6-inch	23-inch	21.2-inch	16.7-inch	15-inch	8.4-inch
LCD Panel	a-Si TFT Active Matrix					a-Si TFT Active Matrix
Acceptable Computer System	VGA to WXGA					No
Panel Aspect Ratio	15:9		4:3	15:9	4:3	4:3
Protection Panel/AR Coating	Yes					Yes
16:9 Capability	Yes					Yes
HD or SD	HD/SD					HD/SD
Composite Video Input/Output	1x					2x
Y/C Input/Output	1x					1x
Component (Y, R-Y, B-Y)/RGB Input	1x					1x
SD-SDI video input	2x (with BKM-220D or BKM-243HS)					2x HD or SD Auto detective
HD-SDI Video Input	2x (with BKM-243HS)					
SDI with Audio Decoding	Yes					Yes
Computer Input	Yes					No
I.Link Video Input	2x (with BKM-255DV)					No
Audio Input/Output	Yes					Yes
External Sync Input/Output	Yes					Yes
EIA 19-inch Rack Mounting	No		MB-523	MB-522A	MB-524	MB-525
VESA Mounting	Not Applicable		75 x 75 holes			Not Applicable
Desk-top Stand	Floor Stand SU-559		SU-558			Stand supplied
Overscan	Yes					Yes
Color Temperature	Selectable					Selectable
Blue Only	Yes					Yes
H/V Delay	Yes					No
Tally	No	3-Color				3-Color
Area Marker	Yes					Yes
Li-Ion Battery Operation	No					Yes
DC Operation	LMD-322W: No MEU + LMD-322W: No	LMD-232W: Yes MEU + LMD-232W: No	LMD-212: Yes MEU + LMD-212: No	LMD-172W: Yes MEU + LMD-172W: Yes	LMD-152: Yes MEU + LMD-152: Yes	Yes

\* Viewable area measured diagonally.

# Monitors

	One-piece Type				Multi-display Type		
Monitor System	LMD-2020	LMD-1420	LMD-2010	LMD-1410	LMD-7220W	LMD-5320	LMD-4420
Page	p 617	p 621	p 619	p 623	p 627	p 628	p 629
Picture Resolution	640 x 480 dots				480 x 234 dots	320 x 234 dots	480 x 234 dots
Picture Size*	20.1-inch	14-inch	20.1-inch	14-inch	2 x 7-inch	3 x 5.6-inch	4 x 4-inch
LCD Panel	a-Si TFT Active Matrix				a-Si TFT Active Matrix		
Acceptable Computer System	No				No		
Panel Aspect Ratio	4:3				16:9	4:3	
Protection Panel/AR Coating	Yes		No		No		
16:9 Capability	Yes				Yes	No	
HD or SD	SD only				SD only		
Composite Video Input/Output	2x				1x		
Y/C Input/Output	1x				No		
Component (Y, R-Y, B-Y)/RGB Input	1x				No		
SD-SDI video input	1x (with BKM-320D)		No		1x (with BKM-320D)		
HD-SDI Video Input	No				No		
SDI with Audio Decoding	No				No		
Computer Input	No				No		
I.Link Video Input	No				No		
Audio Input/Output	Yes				No		
External Sync Input/Output	Yes		No		No		
EIA 19-inch Rack Mounting	MB-527	MB-526	MB-527	MB-526	Supplied		
VESA Mounting	100 x 100 holes				Not Applicable		
Desk-top Stand	Stand supplied				Not Applicable		
Overscan	Yes				No		
Color Temperature	Selectable				Selectable		
Blue Only	Yes		No		No		
H/V Delay	No				No		
Tally	3-Color		No		3-Color		
Area Marker	Yes		No		No		
Li-Ion Battery Operation	No				No		
DC Operation	No				Yes		

\* Viewable area measured diagonally.

Monitors

LMD-322W LCD Monitor

32-inch wide aspect ratio high-brightness LCD panel for professional picture monitoring

Features

●32-inch(\*) screen display ●High resolution of 1280 x 768 pixels (WXGA) ●Used in combination with the Multiformat Engine Unit, MEU-WX2 ●Superb picture performance provides excellent brightness and contrast, and wide viewing angle ●AR-Coated protection panel ●Slim and lightweight ●330 x 330 mm pitch mounting hooks available on rear

\* Viewable area measured diagonally



Optional Accessories

SU-559 Monitor Stand  
SMF-600 Display IF Cable

Specifications

Picture Performance

Type  
a-Si TFT Active Matrix LCD with a multi-layer AR-coated protection panel

Resolution  
1280 x 768 dots

Pixel efficiency  
99.99%

Dot pitch  
0.537 x 0.537 mm

Picture Size (H x W)  
(Diagonal)  
Approx. 687 x 412 mm  
(27 1/8 x 16 1/5 inches)  
802 mm (31 5/8 inches)

Aspect  
15:09

Colors  
16,770,000 colors

Viewing Angle  
85°/85°/85°/85° (typical) (up/down/left/right contrast>10:1)

Input

Display Input connector  
Digital input  
DVI-D  
Dot clock  
25.175 MHz, 68.250 MHz  
Scanning Frequency  
Horizontal: 31.469 kHz, 47.396 kHz  
Vertical: 59.940 Hz, 59.995 Hz

General

Power Consumption  
Approx. 120 W  
Power requirement  
AC 100 to 240 V ±10%, 50/60 Hz  
Operating Temperature  
0 to 35°C (32 to 95 °F)  
Operating Humidity  
30 to 80% (no condensation)  
Storage & Transport Temperature  
-10 to 40°C (14 to 104°F)  
Storage & Transport Humidity  
0 to 80%  
Operating/Storage/Trans. Pressure  
700 to 1060 hPa

Dimensions (W x H x D)  
790 x 512 x 94 mm  
(31 1/8 x 20 1/4 x 3 3/4 inches)  
Mass

Approx. 17.6 Kg (Approx. 38 lb 13 oz)  
Approx. 49.6 Kg (Approx. 108 lb 22 oz)

Supplied Accessories  
AC cord, AC plug holder, Display interface cable, Warranty card, Operating instructions

## Monitors

# LMD-232W LCD monitor

23-inch wide aspect ratio high-brightness LCD panel for professional picture monitoring.

### Features

●24-inch(\*) screen display ●High resolution of 1280 x 768 pixels (WXGA) ●Used in combination with the MEU-WX2, Multiformat Engine Unit ●Superb picture performance provides excellent brightness and contrast and wide viewing angle ●AR-Coated protection panel ●Slim and Lightweight

\* Viewable area measured diagonally

### Optional Accessories

SU-558 Monitor Stand

SMF-600 Display IF Cable

### Specifications

#### Picture Performance

##### Type

a-Si TFT Active Matrix LCD with a multi-layer  
AR-coated protection panel

##### Resolution

1280 x 768 dots

##### Pixel efficiency

99.99%

##### Dot pitch

0.3915 x 0.3915 mm

##### Picture Size (H x W)

##### (Diagonal)

Approx. 501 x 301 mm

(19 3/4 x 11 7/8 inches)

584 mm (23 inches)

##### Aspect

15:09

##### Colors

16,770,000 colors

##### Viewing Angle

85°/85°/85°/85° (typical) (up/down/left/right  
contrast>10:1)

#### Input

##### Display Input connector

Digital input

DVI-D

Dot clock

25.175 MHz, 68.250 MHz

Scanning Frequency

Horizontal: 31.469 kHz, 47.396 kHz

Vertical: 59.940 Hz, 59.995 Hz

#### General

##### Power Consumption

Approx. 65 W

##### Power requirement

DC 16.5 V

##### Operating Temperature

0 to 35 °C (32 to 95 °F)

##### Operating Humidity

30 to 80% (no condensation)

##### Storage & Transport Temperature

-10 to 40 °C (14 to 104 °F)

##### Storage & Transport Humidity

0 to 80%

##### Operating/Storage/Trans. Pressure

700 to 1060 hPa

##### Dimensions (W x H x D)

563 x 372 x 78 mm

(22 1/4 x 14 3/4 x 3 1/8 inches)

##### Mass

Approx. 6.4 Kg (Approx. 14 lb 2 oz)

Approx. 11.6 Kg (Approx. 25 lb 9 oz)

##### Supplied Accessories

Display interface cable, Warranty card,

Operating instructions



Monitors

LMD-212 LCD Monitor

21-inch 4:3 aspect ratio high-brightness LCD panel for professional picture monitoring

Features

- 21-inch (\*) screen display
- High resolution of 1024 x 768 pixels (XGA)
- Used in combination with the MEU-WX2 Multiformat Engine Unit
- Superb picture performance provides excellent brightness and contrast, and wide viewing angle
- AR-Coated protection panel
- Slim and lightweight.
- 19-inch EIA standard rack mountable in 10U height using MB-523 mounting bracket
- VESA compatible mounting holes (75 x 75 mm pitch)
- Three-color tally

\* Viewable area measured diagonally



Optional Accessories

- SU-558 Monitor Stand
- SMF-600 Display IF Cable
- MB-523 Rack-Mount Bracket

Specifications

Picture Performance

- Type
  - a-Si TFT Active Matrix LCD with a multi-layer AR-coated protection panel
- Resolution
  - 1024 x 768 dots
- Pixel efficiency
  - 99.99%
- Dot pitch
  - 0.420 x 0.420 mm
- Picture Size (H x W) (Diagonal)
  - Approx. 430 x 323 mm (17 x 12 3/4 inches)
  - 538 mm (21 1/4 inches)
- Aspect
  - 4:3
- Colors
  - 16,770,000 colors
- Viewing Angle
  - 85°/85°/85°/85° (typical) (up/down/left/right contrast>10:1)

Input

- Display Input connector
  - Digital input
    - DVI-D
  - Dot clock
    - 25.175 MHz, 65.000 MHz
  - Scanning Frequency
    - Horizontal: 31.469 kHz, 48.363 kHz
    - Vertical: 59.940 Hz, 60.004 Hz

General

- Power Consumption
  - Approx. 84 W
- Power requirement
  - DC 16.5 V
- Operating Temperature
  - 0 to 35 °C (32 to 95 °F)
- Operating Humidity
  - 30 to 80% (no condensation)
- Storage & Transport Temperature
  - 10 to 40 °C (14 to 104 °F)

- Storage & Transport Humidity
  - 0 to 80%
- Operating/Storage/Trans. Pressure
  - 700 to 1060 hPa
- Dimensions (W x H x D)
  - 515 x 409 x 81 mm (20 3/8 x 16 1/8 x 3 1/4 inches)
- Mass
  - Approx. 6.7 Kg (Approx. 15 lb 7 oz)
  - Approx. 11.9 Kg (Approx. 26 lb 4 oz)
- Supplied Accessories
  - Display interface cable, Warranty card, Operating instructions

Monitors

LMD-172W LCD Monitor

17-inch wide aspect ratio high-brightness LCD panel for professional picture monitoring.

Features

●17-inch(\*) screen display ●High resolution of 1280 x 768 pixels (WXGA) ●Used in combination with the MEU-WX2 Multiformat Engine Unit ●Superb picture performance provides excellent brightness and contrast, and Wide viewing angle ●AR-Coated protection panel ●Slim and lightweight. ●19-inch EIA standard rack mountable in 7U height using MB-522 mounting bracket ●VESA compatible mounting holes (75 x 75 mm pitch) ●Three-color tally

\* Viewable area measured diagonally



Supplied Accessories

Display Interface Cable (1)  
Warranty Card (1)  
Operating Instructions (1)

Optional Accessories

SMF-600 Display IF Cable  
SU-558 Monitor Stand  
MB-522A Rack-Mount Bracket

Specifications

Picture Performance

Type  
a-Si TFT Active Matrix LCD with a multi-layer AR-coated protection panel  
Resolution  
1280 x 768 dots  
Pixel efficiency  
99.99%  
Dot pitch  
0.284 x 0.284 mm  
Picture Size (H x W)  
(Diagonal)  
Approx. 364 x 218 mm  
(14 3/8 x 8 5/8 inches)  
424 mm (16 3/4 inches)  
Aspect  
15:9  
Colors  
16,770,000 colors  
Viewing Angle  
85°/85°/85°/85° (typical) (up/down/left/right contrast>10:1)

Input

Display Input connector  
Digital input  
DVI-D  
Dot clock  
25.175 MHz, 68.250 MHz  
Scanning Frequency  
Horizontal: 31.469 kHz, 47.396 kHz  
Vertical: 59.941 Hz, 59.995 Hz

General

Power Consumption  
Approx. 53 W  
Power requirement  
DC 16.5 V/12V  
Operating Temperature  
0 to 35 °C (32 to 95 °F)  
Operating Humidity  
30 to 80% (no condensation)  
Storage & Transport Temperature  
-10 to 40 °C (14 to 104 °F)

Storage & Transport Humidity

0 to 80%  
Operating/Storage/Trans. Pressure  
700 to 1060 hPa  
Dimensions (W x H x D)  
441 x 294 x 76 mm  
(17 3/8 x 11 5/8 x 3 inches)  
Mass

Approx. 4.8 Kg (Approx. 10 lb 9 oz)  
Approx. 10.0 Kg (Approx. 21 lb 1 oz)  
Supplied Accessories  
Display interface cable, Warranty card,  
Operating instructions



Monitors

Monitors

LMD-152 LCD Monitor

15-inch 4:3 aspect ratio high-brightness LCD panel for professional picture monitoring

Features

- 15-inch (\*) screen display
- High resolution of 1024 x 768 pixels (XGA)
- Used in combination with the MEU-WX2 Multiformat Engine Unit
- Superb picture performance provides excellent brightness and contrast, and wide viewing angle
- AR-Coated protection panel
- Slim and lightweight
- 19-inch EIA standard rack mountable in 7U height using MB-524 mounting bracket
- VESA compatible mounting holes (75 x 75 mm pitch)
- Three-color tally

\* Viewable area measured diagonally



Optional Accessories

- MB-524 Rack-Mount Bracket
- SMF-600 Display IF Cable
- SU-558 Monitor Stand

Specifications

Picture Performance

- Type
  - a-Si TFT Active Matrix LCD with a multi-layer AR-coated protection panel
- Resolution
  - 1024 x 768 dots
- Pixel efficiency
  - 99.99%
- Dot pitch
  - 0.297 x 0.297 mm
- Picture Size (H x W) (Diagonal)
  - Approx. 304 x 228 mm (12 x 9 inches)
  - 380 mm (15 inches)
- Aspect
  - 4:3
- Colors
  - 16,770,000 colors
- Viewing Angle
  - 85°/85°/85°/85° (typical) (up/down/left/right contrast>10:1)

Input

- Display Input connector
  - Digital input
    - DVI-D
- Dot clock
  - 25.175 MHz, 65.000 MHz
- Scanning Frequency
  - Horizontal: 31.469 kHz, 48.363 kHz
  - Vertical: 59.941 Hz, 60.004 Hz

General

- Power Consumption
  - Approx. 29 W
- Power requirement
  - DC 16.5 V/12 V
- Operating Temperature
  - 0 to 35 °C (32 to 95 °F)
- Operating Humidity
  - 30 to 80% (no condensation)
- Storage & Transport Temperature
  - 10 to 40 °C (14 to 104 °F)
- Storage & Transport Humidity
  - 0 to 80%

- Operating/Storage/Trans. Pressure
  - 700 to 1060 hPa
- Dimensions (W x H x D)
  - 379 x 297x 70 mm (15 x 11 5/8 x 2 7/8 inches)
- Mass
  - Approx. 4.0 Kg (Approx. 8 lb 13oz)
  - Approx. 9.2 Kg (Approx. 20 lb 4oz)
- Supplied Accessories
  - Display interface cable, Warranty card, Operating instructions

## Monitors

# MEU-WX2 Multifformat Engine Unit

Multifformat Engine Unit for use with an LCD panel  
(LMD-322W, LMD-232W, LMD-212, LMD-172W, and LMD-152)

### Features

- Signal processing unit for the LMD-322W, LMD-232W, LMD-212, LMD-172W, and LMD-152
- Accepts RGB, analog component, Composite, S-Video signals as standard. Accepts SD-SDI signals, HD-SDI and DV signals by use of the appropriate optional input adaptor
- Sophisticated I/P Conversion using X-Algorithm technology
- Accurate Gamma and stable White Balance using ChromaTru technology
- Various Marker settings
- Color temperature selection
- Selectable scan size and aspect ratio
- Parallel remote control
- Stereo audio monitoring
- Protected controls
- H/V delay function
- Setup level for analog component and NTSC signal
- Blue-only mode
- Monochrome mode
- Auto Chroma/Phase setup
- External sync capability
- Smart APA (Auto Pixel Alignment)
- Lightweight in 1U size



### Supplied Accessories

Display interface cable (1)  
Screw (4)  
CD-ROM (1)  
CD-ROM manual (1)  
AC plug holder (1)  
AC cord (1)  
Operating manuals (1)  
Warranty card (1)  
Mounting bracket (for MEU) (1)

### Optional Accessories

BKM-255DV DV Input Adaptor  
SMF-600 Display IF Cable  
BKM-220D SDI 4:2:2 Input Adaptor  
BKM-243HS HD SDI&SDI Input Adaptor

### Specifications

#### Input

##### Composite

BNC, Loop through, automatic 75  $\Omega$  termination (x1)  
1.0 Vp-p  $\pm 3$  dB, sync negative

##### Y/C

BNC, Loop through, automatic 75  $\Omega$  termination (x2)  
S-Y: 1.0 Vp-p  $\pm 3$  dB, sync negative  
S-C: 0.286 Vp-p  $\pm 3$  dB (NTSC)  
0.3 Vp-p  $\pm 3$  dB (PAL)

##### Component

BNC, Loop through, automatic 75  $\Omega$  termination (x3)  
0.7 Vp-p  $\pm 3$  dB

##### RGB

BNC, Loop through, automatic 75  $\Omega$  termination (x3)  
G: 0.7 Vp-p  $\pm 3$  dB, Sync on G 0.3Vp-p  
B: 0.7 Vp-p  $\pm 3$  dB  
R: 0.7 Vp-p  $\pm 3$  dB

##### Audio in (for Video signals)

Stereo mini jack (x1), -5 dBu, more than 47 k $\Omega$

##### OPTION A-1

Option Slot (x1)

##### OPTION A-2

Option Slot (x1)

##### OPTION B-1

Option Slot (x1)

##### OPTION B-2

Option Slot (x1)

##### Ext. sync

BNC, Loop-through, automatic 75  $\Omega$  termination

0.3 ~ 4 Vp-p  $\pm 3$  dB, sync negative, usable tri-level sync signal 0.6 Vp-p  $\pm 3$  dB

##### Computer

HD D-sub 15-pin (female) (x1), 0.7 Vp-p, 75  $\Omega$ , positive (R,G,B)

##### Audio in (for computer signals)

Stereo mini jack (x1), -5 dBu, more than 47 k $\Omega$

##### DC IN

XLR 4-pin (male) (x1), 12 V, output impedance 0.05  $\Omega$  or less

### Output

##### Audio monitor out

Stereo mini jack (x1)

##### Speaker Out

Stereo (0.5 W + 0.5 W)

##### PARALLEL Remote

Modular 8-pin (Assignable)

##### Display Signal Out

Exclusive connector (x1)

##### Display Signal Out

Exclusive connector (x1)

##### Display DC Out

XLR 4-pin (female) (x1), DC 16.5 V (when AC power is supplied)

DC 12 V (when DC power is supplied)

### Video

Horizontal Scanning Frequency

15 to 45 kHz

Frame Scanning Frequency

48 to 60 Hz

### Computer

Dot clock

110 MHz

Horizontal Scanning Frequency

28 to 69 kHz

Vertical Scanning Frequency (frame)

60 to 85 Hz

### Plug & Play

DDC-2B

### General

#### Power consumption

Maximum: Approx. 92 W (with 2 x BKM-243HS and LMD-230W)

Standard: Approx. 26 W (without optional input adaptor)

#### Power requirement

AC 100 to 240 V  $\pm 10\%$ , 50/60 Hz, DC 12 V (LMD-170W only)

#### Operating Temperature

0 to 35  $^{\circ}$ C (32 to 95  $^{\circ}$ F)

#### Operating Humidity

30 to 85% (no condensation)

#### Storage and Trans. Temperature

-10 to 40  $^{\circ}$ C (14 to 104  $^{\circ}$ F)

#### Storage & Transport Humidity

0 to 90%

#### Operating/Storage/Trans. Pressure

700 to 1060 hPa

#### Dimensions (W x H x D)

(excluding protrusions)

434 x 44 x 305 mm

(17 1/8 x 1 3/4 x 12 1/8 inches)

#### Mass

Approx. 4.5 Kg (9 lb 15 oz)

#### Supplied Accessories

AC cord, AC plug holder, Mounting bracket, Operating instructions, CD-ROM, Warranty card

## Monitors

### LMD-2020 LCD monitor

20-inch\* 4:3 aspect high-brightness LCD monitor for professional picture monitoring.

#### Features

- 20-inch\* screen display ●640 x 480 pixel panel (VGA)
- Precise reproduction of interlace SD images ●Excellent brightness and contrast and wide viewing angle ●Faithful color reproduction ●Lightweight and thin ●Full range of SD analog inputs ●Digital SD-SDI input capability with use of optional BKM-320D ●4:3/16:9 switchable display
- Various Marker Settings ●Color temperature selection
- Three-color tally ●Selectable scan size ●Parallel remote control ●Monaural audio monitoring ●Protected controls
- Setup level for analog component and NTSC signal
- Blue-only mode ●External sync capability ●AR-Coated protection panel ●19-inch EIA rack mountable ●VESA 100 x 100 mm pitch spacings ●Supplied monitor stand

\* Viewable area measured diagonally

#### Supplied Accessories

Monitor stand (1)  
AC power cord (1)  
AC plug holder (1)  
Operating Instructions (1)  
CD-ROM (1)  
Warranty Card (1)  
Using the CD-ROM Manual (1)

#### Optional Accessories

BKM-320D SDI 4:2:2 Input adaptor  
MB-527 Rack-Mount Bracket



Monitors

Monitors

Specifications

Picture Performance

Type

A-Si TFT Active Matrix LCD with a multi-layer AR-coated protection panel

ResolutionResolution

640 x 480 dots

Pixel efficiency

99.99%

Dot pitch

0.213 x 0.638 mm

Picture Size (H x W)

(Viewable area)

(Diagonal)

Approx. 408 x 306mm

(Approx. 16 1/8 x 12 1/8 inches)

510 mm (20.1-inch)

Aspect

4:3

Colors

Approx. 16,700,000 colors

Viewing Angle

85°/85°/85°/85° (typical) (up/down/left/right contrast>10:1)

Input

Line A

Composite

BNC x 1, 1.0 Vp-p ±3dB 75 Ω termination, sync 0.3 Vp-p negative

Y/C

DIN 4 pin x 1

Y: 1.0Vp-p ±3 dB, 75 Ω termination

C: 0.286 Vp-p ±3 dB (NTSC), 0.3 Vp-p ±3 dB (PAL),

75 Ω termination, sync 0.3 Vp-p negative

Audio in

RCA pin x 1, -5 dBu 47 Ω or higher

Line B

Composite

BNC x 1, 1.0 Vp-p ±3dB 75 Ω termination, sync 0.3 Vp-p negative

Audio in

RCA pin x 1, -5 dBu 47 Ω or higher

RGB/Component

RGB/Component

BNC x 3, 0.7 Vp-p ±3 dB 75 Ω termination, Sync on Green 0.3Vp-p, negative

Audio in

RCA pin x 1, -5 dBu 47 Ω or higher

Option

D1-SDI

D-sub 9-pin x 1

Audio in

RCA pin x 1 -5 dBu 47 Ω or higher

External Sync

BNC x 1

Remote

Parallel remote

Moduler 8-pin (Assignable)

Output

Line A

Composite

BNC x 1, Loop-through, with 75 Ω automatic termination

Y/C

DIN 4 pin x 1, Loop-through, with 75 Ω automatic termination

Audio out

RCA pin x 1

Line B

Composite

BNC x 1, Loop-through, with 75 Ω automatic termination

Audio out

RCA pin x 1, Loop-through

RGB/Component

RGB/Component

BNC x 3, Loop-through, with 75 Ω automatic termination

Audio out

RCA pin x 1, Loop-through

External Sync

BNC x 1 Loop-through with 75 Ω automatic termination

General

Power Consumption

Approx. 87 W

Power requirement

AC 100 to 240 V, 50/60 Hz

Operating Temperature

30 to 85% (No condensation)

Storage & Transport Temperature

-10 to 40 °C

Storage & Transport Humidity

0 to 90 %

Operating/Storage/Trans. Pressure

700 to 1060 hPa

Dimensions (W x H x D)

Dimension

Approx. 470 x 441 x 264 mm (18 5/8 x 17 3/8 x 10 1/2 inch)

Dimension without stand

Approx. 470 x 394 x 87mm (18 5/8 x 15 5/8 x 3 1/2 inch)

Mass

Panel & Stand

Approx. 9.2 kg (20 lb 5 oz)

Panel only

Approx. 7.5 kg (16 lb 9 oz)

Supplied Accessories

AC power code, AC plug holder, Operating Instructions, CD-ROM, Using the CD-ROM Manual, Warranty card

## Monitors

### LMD-2010 LCD monitor

20-inch\* 4:3 aspect high-brightness LCD monitor for professional picture monitoring.

#### Features

- 20-inch\* screen display ●640 x 480 pixel panel (VGA)
- Precise reproduction of interlace SD images ●Excellent brightness and contrast and wide viewing angle ●Faithful color reproduction ●Lightweight and thin ●Full range of SD analog inputs ●4:3/16:9 switchable display ●Color temperature selection ●Selectable scan size ●Parallel remote control ●Monaural audio monitoring ●Protected controls ●Setup level for analog component and NTSC signal ●19-inch EIA rack mountable ●VESA 100 x 100 mm pitch spacings ●Supplied monitor stand

\* Viewable area measured diagonally

#### Supplied Accessories

- Monitor stand (1)
- AC power cord (1)
- AC plug holder (1)
- Operating Instructions (1)
- CD-ROM (1)
- Warranty Card (1)
- Using the CD-ROM Manual (1)

#### Optional Accessories

- BKM-320D SDI 4:2:2 Input adaptor
- MB-527 Rack-Mount Bracket



Monitors

Monitors

Specifications

Picture Performance

Type  
A-Si TFT Active Matrix LCD

ResolutionResolution  
640 x 480 dots

Pixel efficiency  
99.99%

Dot pitch  
0.213 x 0.638 mm

Picture Size (H x W)  
(Viewable area)  
(Diagonal)  
Approx. 408 x 306mm  
(Approx. 16 1/8 x 12 1/8 inches)  
510 mm (20.1-inch)

Aspect  
4:3

Colors  
Approx. 16,700,000 colors

Viewing Angle  
85°/85°/85°/85° (typical) (up/down/left/right  
contrast>10:1)

Input

Line A  
Composite  
BNC x 1, 1.0 Vp-p ±3dB 75 Ω  
termination, sync 0.3 Vp-p negative  
Y/C  
DIN 4 pin x 1

Y: 1.0Vp-p ±3 dB, 75 Ω termination  
C: 0.286 Vp-p ±3 dB (NTSC), 0.3 Vp-p ±3  
dB (PAL),  
75 Ω termination, sync 0.3 Vp-p negative

Audio in  
RCA pin x 1, -5 dBu 47 Ω or higher

Line B  
Composite  
BNC x 1, 1.0 Vp-p ±3dB 75 Ω  
termination, sync 0.3 Vp-p negative

Audio in  
RCA pin x 1, -5 dBu 47 Ω or higher

RGB/Component  
RGB/Component  
BNC x 3, 0.7 Vp-p ±3 dB 75 Ω  
termination, Sync on Green 0.3Vp-p,  
negative

Audio in  
RCA pin x 1, -5 dBu 47 Ω or higher

Remote  
Parallel remote  
Moduler 8-pin (Assignable)

Output

Line A  
Composite  
BNC x 1, Loop-through, with 75 Ω  
automatic termination

Y/C  
DIN 4 pin x 1, Loop-through, with 75 Ω  
automatic termination

Audio out  
RCA pin x 1

Line B  
Composite  
BNC x 1, Loop-through, with 75 Ω  
automatic termination

Audio out  
RCA pin x 1, Loop-through

RGB/Component  
RGB/Component  
BNC x 3, Loop-through, with 75 Ω  
automatic termination

Audio out  
RCA pin x 1, Loop-through

General

Power Consumption  
Approx. 84 W

Power requirement  
AC 100 to 240 V, 50/60 Hz

Operating Temperature  
30 to 85% (No condensation)

Storage & Transport Temperature  
-10 to 40 °C

Storage & Transport Humidity  
0 to 90 %

Operating/Storage/Trans. Pressure  
700 to 1060 hPa

Dimensions (W x H x D)  
Dimension  
Approx. 470 x 441 x 264 mm (18 5/8 x  
17 3/8 x 10 1/2 inch)  
Dimension without stand  
Approx. 470 x 394 x 87mm (18 5/8 x 15  
5/8 x 3 1/2 inch)

Mass  
Panel & Stand  
Approx. 8.7 Kg (19 lb 3 oz)  
Panel only  
Approx. 7.0 kg (15 lb 7 oz)

Supplied Accessories  
AC power code, AC plug holder,  
Operating Instructions, CD-ROM, Using  
the CD-ROM Manual, Warranty card

## Monitors

### LMD-1420 LCD monitor

14-inch\* 4:3 aspect high-brightness LCD monitor for professional picture monitoring.

#### Features

- 14-inch\* screen display ●640 x 480 pixel panel (VGA)
- Precise reproduction of interlace SD images ●Excellent brightness and contrast and wide viewing angle ●Faithful color reproduction ●Lightweight and thin ●Full range of SD analog inputs ●Digital SD-SDI input capability with use of optional BKM-320D ●4:3/16:9 switchable display
- Various Marker Settings ●Color temperature selection
- Three-color tally ●Selectable scan size ●Parallel remote control ●Monaural audio monitoring ●Protected controls
- Setup level for analog component and NTSC signal
- Blue-only mode ●External sync capability ●AR-Coated protection panel ●19-inch EIA rack mountable ●VESA 100 x 100 mm pitch spacings ●Supplied monitor stand

\* Viewable area measured diagonally

#### Supplied Accessories

- Monitor stand (1)
- AC power cord (1)
- AC plug holder (1)
- Operating Instructions (1)
- CD-ROM (1)
- Warranty Card (1)
- Using the CD-ROM Manual (1)

#### Optional Accessories

- BKM-320D SDI 4:2:2 Input adaptor
- MB-526 Rack-Mount Bracket



Monitors

Monitors

Specifications

Picture Performance

Type

A-Si TFT Active Matrix LCD with a multi-layer AR-coated protection panel

ResolutionResolution

640 x 480 dots

Pixel efficiency

99.99%

Dot pitch

0.443 x 0.443 mm

Picture Size (H x W)

(Viewable area)

(Diagonal)

Approx. 283 x 212 mm

(Approx. 11 1/4 x 8 3/8 inches)

354 mm (14-inch)

Aspect

4:3

Colors

Approx. 16,200,000 colors

Viewing Angle

85°/85°/85°/85° (typical) (up/down/left/right contrast>10:1)

Input

Line A

Composite

BNC x 1, 1.0 Vp-p ±3dB 75 Ω termination, sync 0.3 Vp-p negative

Y/C

DIN 4 pin x 1

Y: 1.0Vp-p ±3 dB, 75 Ω termination

C: 0.286 Vp-p ±3 dB (NTSC), 0.3 Vp-p ±3 dB (PAL),

75 Ω termination, sync 0.3 Vp-p negative

Audio in

RCA pin x 1, -5 dBu 47 Ω or higher

Line B

Composite

BNC x 1, 1.0 Vp-p ±3dB 75 Ω termination, sync 0.3 Vp-p negative

Audio in

RCA pin x 1, -5 dBu 47 Ω or higher

RGB/Component

RGB/Component

BNC x 3, 0.7 Vp-p ±3 dB 75 Ω termination, Sync on Green 0.3Vp-p, negative

Audio in

RCA pin x 1, -5 dBu 47 Ω or higher

Option

D1-SDI

D-sub 9-pin x 1

Audio in

RCA pin x 1 -5 dBu 47 Ω or higher

External Sync

BNC x 1

Remote

Parallel remote

Moduler 8-pin (Assignable)

Output

Line A

Composite

BNC x 1, Loop-through, with 75 Ω automatic termination

Y/C

DIN 4 pin x 1, Loop-through, with 75 Ω automatic termination

Audio out

RCA pin x 1

Line B

Composite

BNC x 1, Loop-through, with 75 Ω automatic termination

Audio out

RCA pin x 1, Loop-through

RGB/Component

RGB/Component

BNC x 3, Loop-through, with 75 Ω automatic termination

Audio out

RCA pin x 1, Loop-through

External Sync

BNC x 1 Loop-through with 75 Ω automatic termination

General

Power Consumption

Approx. 87 W

Power requirement

AC 100 to 240 V, 50/60 Hz

Operating Temperature

30 to 85% (No condensation)

Storage & Transport Temperature

-10 to 40 °C

Storage & Transport Humidity

0 to 90 %

Operating/Storage/Trans. Pressure

700 to 1060 hPa

Dimensions (W x H x D)

Dimension

Approx. 343 x 354 x 264 mm (13 5/8 x 14 x 10 1/2 inch)

Dimension without stand

Approx. 343 x 304 x 87mm (13 5/8 x 12 x 3 1/2 inch)

Mass

Panel & Stand

Approx. 6.8 kg (14 lb 16 oz)

Panel only

Approx. 5.1 kg (11 lb 4 oz)

Supplied Accessories

AC power code, AC plug holder, Operating Instructions, CD-ROM, Using the CD-ROM Manual, Warranty card

## Monitors

### LMD-1410 LCD monitor

14-inch\* 4:3 aspect high-brightness LCD monitor for professional picture monitoring.

#### Features

- 14-inch\* screen display ●640 x 480 pixel panel (VGA)
- Precise reproduction of interlace SD images ●Excellent brightness and contrast and wide viewing angle ●Faithful color reproduction ●Lightweight and thin ●Full range of SD analog inputs ●4:3/16:9 switchable display ●Color temperature selection ●Selectable scan size ●Parallel remote control ●Monaural audio monitoring ●Protected controls ●Setup level for analog component and NTSC signal ●19-inch EIA rack mountable ●VESA 100 x 100 mm pitch spacings ●Supplied monitor stand

\* Viewable area measured diagonally

#### Supplied Accessories

Monitor stand (1)  
AC power cord (1)  
AC plug holder (1)  
Operating Instructions (1)  
CD-ROM (1)  
Warranty Card (1)  
Using the CD-ROM Manual (1)

#### Optional Accessories

BKM-320D SDI 4:2:2 Input adaptor  
MB-526 Rack-Mount Bracket



Monitors

Monitors

Specifications

Picture Performance

Type  
A-Si TFT Active Matrix LCD  
ResolutionResolution  
640 x 480 dots  
Pixel efficiency  
99.99%  
Dot pitch  
0.443 x 0.443 mm  
Picture Size (H x W)  
(Viewable area)  
(Diagonal)  
Approx. 283 x 212 mm  
(Approx. 11 1/4 x 8 3/8 inches)  
354 mm (14-inch)  
Aspect  
4:3  
Colors  
Approx. 16,200,000 colors  
Viewing Angle  
85°/85°/85°/85° (typical) (up/down/left/right  
contrast>10:1)

Input

Line A  
Composite  
BNC x 1, 1.0 Vp-p ±3dB 75 Ω  
termination, sync 0.3 Vp-p negative  
Y/C  
DIN 4 pin x 1  
Y: 1.0Vp-p ±3 dB, 75 Ω termination  
C: 0.286 Vp-p ±3 dB (NTSC), 0.3 Vp-p ±3  
dB (PAL),  
75 Ω termination, sync 0.3 Vp-p negative  
Audio in  
RCA pin x 1, -5 dBu 47 Ω or higher  
Line B  
Composite  
BNC x 1, 1.0 Vp-p ±3dB 75 Ω  
termination, sync 0.3 Vp-p negative  
Audio in  
RCA pin x 1, -5 dBu 47 Ω or higher  
RGB/Component  
RGB/Component  
BNC x 3, 0.7 Vp-p ±3 dB 75 Ω  
termination, Sync on Green 0.3Vp-p,  
negative  
Audio in  
RCA pin x 1, -5 dBu 47 Ω or higher  
Remote  
Parallel remote  
Moduler 8-pin (Assignable)

Output

Line A  
Composite  
BNC x 1, Loop-through, with 75 Ω  
automatic termination  
Y/C  
DIN 4 pin x 1, Loop-through, with 75 Ω  
automatic termination  
Audio out  
RCA pin x 1  
Line B  
Composite  
BNC x 1, Loop-through, with 75 Ω  
automatic termination  
Audio out  
RCA pin x 1, Loop-through  
RGB/Component  
RGB/Component  
BNC x 3, Loop-through, with 75 Ω  
automatic termination  
Audio out  
RCA pin x 1, Loop-through

General

Power Consumption  
Approx. 48 W  
Power requirement  
AC 100 to 240 V, 50/60 Hz  
Operating Temperature  
30 to 85% (No condensation)  
Storage & Transport Temperature  
-10 to 40 °C  
Storage & Transport Humidity  
0 to 90 %  
Operating/Storage/Trans. Pressure  
700 to 1060 hPa  
Dimensions (W x H x D)  
Dimension  
Approx. 343 x 354 x 264 mm (13 5/8 x  
14 x 10 1/2 inch)  
Dimension without stand  
Approx. 343 x 304 x 87mm (13 5/8 x  
123 1/2 inch)  
Mass  
Panel & Stand  
Approx. 6.5 Kg (14 lb 5 oz)  
Panel only  
Approx. 4.8 kg (10 lb 9 oz)  
Supplied Accessories  
AC power code, AC plug holder,  
Operating Instructions, CD-ROM, Using  
the CD-ROM Manual, Warranty card



Monitors

## Monitors

### LMD-9050 LCD monitor

9-inch\* 4:3 aspect ratio high-brightness LCD monitor for professional picture monitoring

#### Features

- 9-inch\* screen display ●High resolution of 1024 x 768 pixel panel (XGA) ●Superb picture performance provides excellent brightness and contrast, and wide viewing angle
- Accepts RGB, analog component, Composite, S-Video, and SDI signals (SD/HD) ●4:3/16:9 switchable display
- Selectable scan size ●Various Marker settings ●Color temperature selection ●Three-color tally ●Parallel remote control
- Monaural audio monitoring ●Protected controls
- Setup level for analog component and NTSC signal
- Blue-only mode ●Monochrome mode ●Slim and lightweight (Half-rack wide, 5U high) ●19-inch EIA standard rack mountable using MB-525 mounting bracket

\* Viewable area measured diagonally

#### Optional Accessories

MB-525 Mounting Bracket

MB-528 Mounting Panel

VF-509 Monitor ENG Kit

BP-GL95 Rechargeable Lithium-ion Battery Pack

BP-GL65 Rechargeable Lithium-ion Battery Pack

BP-L60S Rechargeable Lithium-ion Battery Pack

BC-L70 Li-ion Battery Charger

BKM-320D SDI 4:2:2 Input adaptor



Monitors

# Monitors

## Specifications

### Picture Performance

#### Type

a-Si TFT Active Matrix LCD with a multi-layer AR-coated protection panel

#### Resolution

1024 x 768 dots

#### Pixel efficiency

99.99%

#### Picture Size (H x W), (Viewable area)

#### (Diagonal)

Approx. 170.5 x 127.9 mm, (Approx. 6 3/4 x 5 1/8 inches)

213 mm (8.4-inch)

#### Aspect

4:03

#### Colors

16,770,000 colors

#### Viewing Angle

85 °/85 °/85 °/85 °(typical)

(up/down/left/right contrast>10:1)

### Input

#### Line A

##### Composite

BNC x 1, 1.0 Vp-p +3dB, -6 dB sync negative

##### Y/C

4-pin mini-DIN x 1

Y : 1.0 Vp-p + 3dB, -6 dB sync negative

C : 0.286 Vp-p ±3 dB (NTSC), 0.3 Vp-p ±3 dB (PAL)

##### Audio

Mini jack x 1, -5 dBu 47 kΩ or higher

#### Line B

##### Composite

BNC x 1, 1.0 Vp-p +3 dB, -6 dB sync negative

##### Audio

Mini jack x 1, -5 dBu 47 kΩ or higher

#### RGB/Component

##### RGB/Component

BNC x 3, RGB input : 0.7 Vp-p +3 dB, -6 dB (Sync On Green, 0.3 Vp-p sync negative)

Component input : 0.7 Vp-p +3 dB, -6 dB

(75% chrominance standard color bar signal)

##### Audio

Mini jack x 1, -5 dBu 47 kΩ or higher

#### Ext.sync

BNC x 1, 0.3 to 4 Vp-p negative polarity binary

#### HD-SDI/D1-SDI

BNC x 2 (HD and D1 are automatically detected)

Sampling frequency D1-SDI:Y/R-Y/B-Y 13.5

MHz, HD-SDI:Y/PB/PR 74.25 MHz

Quantization 10 bits/sample

#### Remote

##### Parallel remote

Modular connector 8-pin x 1(Assignable)

### Output

#### Line A

##### Composite

BNC x 1, Loop-through, with 75 Ω automatic termination

##### Y/C

4-pin mini-DIN x 1, Loop-through, with 75 Ω automatic termination

#### Line B

##### Composite

BNC x 1, Loop-through, with 75 Ω automatic termination

#### HD-SDI/D1-SDI Monitor output

BNC x 1, Output signal : amplitude 800 mVp-p ±10%, Output impedance : 75 Ω unbalanced

#### Headphones output

Mini jack x 1(Monaural), Loop-through

#### Speaker output

0.5 W (Monaural)

### General

#### Power Consumption

Monitor : Approx. 24 W, With AC Adaptor : Approx. 28 W

#### Power requirement

AC 100 to 240 V, 50/60 Hz, 0.82 A, DC 12 V 2.2 A, Rechargeable Battery Pack

#### Operating Temperature

0 to 40 °C

#### Operating Humidity

30 to 85 % (No condensation)

#### Operating/Storage/Trans. Pressure

700 to 1060 hPa

#### Storage & Transport Temperature

-10 to 40 °C

#### Storage & Transport Humidity

0 to 90 %

#### Dimensions (W x H x D)

Approx. 216 x 206 x 136.1 mm (8 5/8 x 8 1/8 x 5 3/8 inches)

Approx. 216 x 230 x 159.5 mm (8 5/8 x 9 1/8 x 6 3/8 inches) (Dimension with the supplied stand)

Approx. 216 x 230 x 210 mm (8 5/8 x 9 1/8 x 8 3/8 inches) (Dimension with the supplied stand and AC adaptor)

#### Mass

Approx. 3.0 Kg (6 lb 10 oz)

Approx. 3.2 Kg ( 7 lb 1 oz) ()

Approx. 3.9 Kg (8 lb 10 oz) (With the supplied stand and AC adaptor)

#### Supplied Accessories

AC adaptor (1), AC Cord (1), AC plug holder (1), Operating instructions (1), CD-ROM (1), Warranty card (1), Using the CD-ROM Manual (1)

Monitors

LMD-7220W Multiple LCD Monitor

Dual screen 7-inch\* 16:9 aspect ratio high-brightness LCD monitor

Features

●7-inch\* 16:9 aspect ratio LCD panels (x2) ●Selectable Aspect Ratio (between 16:9 and 4:3) ●High picture quality provided by high brightness, high contrast, wide viewing angle panels ●19-inch EIA standard rack mountable ●SDI input (using BKM-320D optional input adaptor) ●Low power consumption ●Slim and Light ●5-step tilt

\* Viewable area measured diagonally



Supplied Accessories

AC power adaptor (1)  
AC power cord (1)  
AC plug holder (1)  
Screws for AC adaptor holder (2)  
Operating Instructions (1)  
Warranty Card (1)

Optional Accessories

BKM-320D SDI 4:2:2 Input adaptor

Specifications

Picture Performance

Type  
a-Si TFT Active Matrix  
Resolution  
320 x 234 dots  
Pixel efficiency  
99.99%  
Picture Size (H x W)  
(Viewable area)  
(Diagonal)  
Approx. 154.1 x 86.6 mm  
(Approx. 6 1/8 x 3 1/2 inches)  
7 inches (176.7 mm)  
Aspect  
16:09  
Colors  
Full color  
Viewing Angle  
40°/65°/65°/65° (typical) (up/down/left/right  
contrast>10:1)

Input/Output

Composite  
Input  
BNC (x 2), 1.0 Vp-p  $\pm$ 2 dB, sync  
negative  
Output  
BNC (x2), Loop through, Automatic 75  
 $\Omega$  termination  
OPTION IN  
D-sub 9pin (x2)  
Remote  
Parallel  
Modular 8 pin (x2)

General

Power Consumption  
Maximum: Approx. 26 W (with 2 x  
BKM-320D)  
Standard: Approx. 23 W (without optional  
input adaptor)

Power requirement

12V DC (with the supplied AC power  
adaptor), AC power adaptor:AC 100 to 240  
V, 50/60 Hz

Peak inrush current

(1) Power on, current probe method:57A  
(230V)

Operating Temperature

0 to 35°C (32 to 95°F)

Operating Humidity

30 to 85 % (no condensation)

Storage & Transport Humidity

0 to 90 %

Operating / Storage / Trans. Pressure

700 hPa to 1060 hPa

Dimensions (W x H x D)

482 x 133 x 47 mm (19 x 5 1/4 x 1 7/8  
inches)

Dimension including AC adaptor and

BKM-320D  
482 x 133 x 116 mm (19 x 5 1/4 x 4 5/8  
inches)

Mass

Approx. 2.3Kg (Approx. 5 lb 1 oz)

Supplied Accessories

AC power adaptor (1), AC Power Cord (1),  
AC plug holder (1), Screws for AC adaptor  
holder (2), Operating Instructions (1),  
Warranty Card (1)

\*1 Without the projection parts. \*2 Excluding  
supplied accessories.

Monitors

LMD-5320 Multiple LCD Monitor

Triple screen 5.6-inch\* 4:3 aspect ratio high-brightness LCD monitor

Features

- 5.6-inch\* 4:3 aspect ratio LCD panels (x3)
- High picture quality provided by high brightness, high contrast, wide viewing angle panels
- 19-inch EIA standard rack mountable
- SDI input (using BKM-320D optional input adaptor)
- Low power consumption
- Slim and Light
- 5-step tilt

\* Viewable area measured diagonally



Supplied Accessories

- AC power adaptor (1)
- AC power cord (1)
- AC plug holder (1)
- Screws for AC adaptor holder (2)
- Operating Instructions (1)
- Warranty Card (1)

Optional Accessories

- BKM-320D SDI 4:2:2 Input adaptor

Specifications

Picture Performance

- Type
  - a-Si TFT Active Matrix
- Resolution
  - 320 x 234 dots
- Pixel efficiency
  - 99.99%
- Picture Size (H x W)  
(Viewable area)  
(Diagonal)
  - Approx. 113.3 x 84.7 mm
  - (Approx. 4 1/2 x 3 3/8 inches)
  - 5 5/8 inches (141.5 mm)
- Aspect
  - 16:09
- Colors
  - Full color
- Viewing Angle
  - 40°/65°/65°/65° (typical) (up/down/left/right contrast>10:1)

Input/Output

- Composite
  - Input
    - BNC (x 3), 1.0 Vp-p  $\pm$ 2 dB, sync negative
  - Output
    - BNC (x 3), Loop through, Automatic 75  $\Omega$  termination
- OPTION IN
  - D-sub 9pin (x3)
- Remote
  - Parallel
  - Modular 8 pin (x3)

General

- Power Consumption
  - Maximum: Approx. 28 W (with 3 x BKM-320D)
  - Standard: Approx. 22 W (without optional input adaptor)

Power requirement

- 12V DC (with the supplied AC power adaptor), AC power adaptor:AC 100 to 240 V, 50/60 Hz

Peak inrush current

- (1) Power on, current probe method:55A (230V)

Operating Temperature

- 0 to 35°C (32 to 95°F)

Operating Humidity

- 30 to 85 % (no condensation)

Storage & Transport Humidity

- 0 to 90 %

Operating / Storage / Trans. Pressure

- 700 hPa to 1060 hPa

Dimensions (W x H x D)

- 482 x 133 x 47 mm (19 x 5 1/4 x 1 7/8 inches)

Dimension including AC adaptor and BKM-320D

- 482 x 133 x 116 mm (19 x 5 1/4 x 4 5/8 inches)

Mass

- Approx. 2.3Kg (Approx. 5 lb 1 oz)

Supplied Accessories

- AC power adaptor (1), AC Power Cord (1), AC plug holder (1), Screws for AC adaptor holder (2), Operating Instructions (1), Warranty Card (1)

\*1 Without the projection parts. \*2 Excluding supplied accessories.

Monitors

LMD-4420 Multiple LCD Monitor

Quad screen 4-inch\* 4:3 aspect ratio high-brightness LCD monitor

Features

- 4-inch\* 4:3 aspect ratio LCD panels (x4)
- High picture quality provided by high brightness, high contrast, wide viewing angle panels
- 19-inch EIA standard rack mountable
- SDI input (using BKM-320D optional input adaptor)
- Low power consumption
- Slim and Light
- 3-step tilt

\* Viewable area measured diagonally



Supplied Accessories

- AC power adaptor (1)
- AC power cord (1)
- AC plug holder (1)
- Screws for AC adaptor holder (2)
- Operating Instructions (1)
- Warranty Card (1)

Optional Accessories

- BKM-320D SDI 4:2:2 Input adaptor

Specifications

spec

spec

spec

Picture Performance

Type

a-Si TFT Active Matrix

Resolution

480 x 234 dots

Pixel efficiency

99.99%

Picture Size (H x W)

(Viewable area)

(Diagonal)

Approx. 82.1 x 61.8 mm

(Approx. 3 1/4 x 2 1/2 inches)

4 1/8 inches (102.8mm)s

Aspect

16:09

Colors

Full color

Viewing Angle

40°/65°/65°/65° (typical) (up/down/left/right contrast>10:1)

Input/Output

Composite

Input

BNC (x 4), 1.0 Vp-p ±2 dB, sync negative

Output

BNC (x 4), Loop through, Automatic 75 Ω termination

OPTION IN

D-sub 9pin (x4)

Remote

Parallel

Modular 8 pin (x4)

General

Power Consumption

Maximum: Approx. 26 W (with 4 x BKM-320D)

Standard: Approx. 18 W (without optional input adaptor)

Power requirement

12V DC (with the supplied AC power adaptor), AC power adaptor:AC 100 to 240 V, 50/60 Hz

Peak inrush current

(1) Power on, current probe method:53A (230V)

Operating Temperature

0 to 35°C (32 to 95°F)

Operating Humidity

30 to 85 % (no condensation)

Storage & Transport Humidity

0 to 90 %

Operating / Storage / Trans. Pressure

700 hPa to 1060 hPa

Dimensions (W x H x D)

482 x 88.1 x 47 mm (19 x 3 1/2 x 1 7/8 inches)

Dimension including AC adaptor and BKM-320D

482 x 88.1 x 116 mm (19 x 3 1/2 x 4 5/8 inches)

Mass

Approx. 1.9Kg (Approx. 4 lb 3 oz)

Supplied Accessories

AC power adaptor (1), AC Power Cord (1), AC plug holder (1), Screws for AC adaptor holder (2), Operating Instructions (1), Warranty Card (1)

\*1 Without the projection parts. \*2 Excluding supplied accessories.

## Monitors

# PVM-D20L5A Color Video Monitor

### Features

●20-inch\* color video monitor ●HR Trinitron CRT provides a high resolution of 800 TV lines ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Multi-format signal support ●Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs available as standard ●1 slot available for optional input adaptors ●Accepts external sync ●Auto setup for chroma and phase ●Color temperature D65, D93 or user preset selectable ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Auto/manual degaussing ●Mountable into a 19-inch EIA standard rack with the optional Slide Rail

\* 19-inch viewable area, measured diagonally.



### Supplied Accessories

AC Power Cord (1)  
Operation Manual (1)

### Optional Accessories

BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
SLR-104 Slide Rail  
BKM-200M 16:9 Mask

### Specifications

#### General

Color system:  
PAL, NTSC  
Power requirements:  
AC 100 to 240 V, 50/60 Hz  
Power consumption (typical/with options):  
1.3 to 0.6 A, 130 W (with options: 1.4 to 0.7 A, 140 W)  
Operating temperature:  
0 to 35 °C (32 to 95 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
30 to 85% (no condensation)  
Dimensions:  
Approx. 452 (W) x 414 (H) x 500 (D) mm  
(17 7/8 x 16 3/8 x 19 3/4 inches)  
Mass:  
Approx. 31 kg (68 lb 5 oz)  
CRT  
CRT type:  
20-inch HR Trinitron  
AG pitch:  
0.31 mm  
Phosphor:  
EBU  
Effective picture size  
4:3: 388.4 (W) x 292.6 (H) mm, 484.8 mm (diagonal), (15 3/8 x 11 5/8 inches, 19 1/8 inches)  
16:9: 388.4 (W) x 228 (H) mm, 443 mm (diagonal), (15 3/8 x 9 inches, 17 1/2 inches)  
Resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines  
Aperture correction:  
OFF: 0 dB, ON: 2 to 6 dB

#### Frequency response:

LINE: 10.0 MHz +0 dB/-3 dB (Y signal only)

RGB: 10.0 MHz +0 dB/-3 dB

#### Synchronization:

AFC time constant 1.0 ms

#### Scanning frequency:

15.625 kHz to 45 kHz

#### Normal scan:

7% overscan

#### Underscan:

5% underscan

#### Linearity:

Horizontal: less than 5%

Vertical: less than 5%

#### Color temperature:

D65, D93, User adjustable

#### Convergence:

Center: 0.5 mm (typical)

Peripheral: 0.7 mm (typical)

#### Raster size stability:

Horizontal: 1%

Vertical: 1.5%

#### HV regulation:

4%

### Input/output

#### LINE A

##### Composite:

Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

##### Y/C\*:

Loop-through Mini Din 4-pin, automatic 75  $\Omega$  termination

Y: 1.0 Vp-p, sync negative

C: 0.3 Vp-p (PAL) or 0.286 Vp-p (NTSC)

##### Audio:

Phono, -5 dBu 47 k $\Omega$  or higher

#### LINE B

##### Composite:

Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

##### Audio:

Phono, -5 dBu 47 k $\Omega$  or higher

#### RGB/Component:

Loop-through BNC, automatic 75  $\Omega$  termination

##### G/Y:

0.7 Vp-p +3 dB/-6 dB

##### Sync on G:

0.3 Vp-p

##### B/B-Y:

0.7 Vp-p +3 dB/-6 dB

##### R/R-Y:

0.7 Vp-p +3 dB/-6 dB

#### External sync:

Loop-through BNC, automatic 75  $\Omega$  termination

4.0 Vp-p  $\pm$ 6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p  $\pm$ 6 dB

#### Option slot:

x 1

##### Audio:

Phono (x 2), -5 dBu 47 k $\Omega$  or higher

#### Remote

##### Parallel remote:

Modular 8-pin (assignable)

##### Serial remote:

D-sub 9-pin (RS-485)

#### Audio output:

0.8 W (distortion: less than 5%)

### Regulation compliance

UL-1950/CSA-950, DHHS/DNHW, FCC Class A/IC Class A

### Acceptable formats

480/60i (NTSC), 575/50i (PAL), 480/60P, 576/50P, 1080/50i, 1035/60i, 1080/60i, 720/60P

\* The Y/C input has priority over the composite input.

## Monitors

# PVM-D14L5A Color Video Monitor

### Features

●14-inch\* color video monitor ●HR Trinitron CRT provides a high resolution of 800 TV lines ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Multi-format signal support ●Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs available as standard ●1 slot available for optional input adaptors ●Accepts external sync ●Auto setup for chroma and phase ●Color temperature D65, D93 or user preset selectable ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Serial and parallel remote control capability ●Auto/manual degaussing ●Mountable into an EIA standard rack with the optional rack mounting bracket



\* 13 1/8-inch viewable area, measured diagonally.

### Supplied Accessories

AC Power Cord (1)  
Operation Manual (1)

### Optional Accessories

BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
MB-521 Mounting Bracket  
BKM-140M 16:9 Mask

### Specifications

#### General

Color system:  
PAL, NTSC  
Power requirements:  
AC 100 to 240 V, 50/60 Hz  
Power consumption:  
1.1 to 0.5 A, 110 W (with options: 1.2 to 0.6 A, 120 W)  
Operating temperature:  
0 to 35 °C (32 to 95 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
30 to 85% (no condensation)  
Dimensions:  
Approx. 346 (W) x 280 (H) x 424 (D) mm  
(13 5/8 x 11 1/8 x 16 3/4 inches)  
Mass:  
Approx. 17 kg (37 lb 8 oz)  
CRT  
CRT type:  
14-inch HR Trinitron  
AG pitch:  
0.25 mm  
Phosphor:  
EBU  
Effective picture size  
4:3: 267.5 (W) x 200.6 (H) mm, 331.6 mm (diagonal), (10 5/8 x 8 inches, 13 1/8 inches)  
16:9: 267.5 (W) x 150.5 (H) mm, 306.9 mm (diagonal), (10 5/8 x 6 inches, 12 1/8 inches)  
Resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines  
Aperture correction:  
OFF: 0 dB, ON: 2 to 6 dB

#### Frequency response:

LINE: 10.0 MHz +0 dB/-3 dB (Y signal only)  
RGB: 10.0 MHz +0 dB/-3 dB

#### Synchronization:

AFC time constant 1.0 ms

#### Scanning frequency:

15.625 kHz to 45 kHz

#### Normal scan:

7% overscan

#### Underscan:

5% underscan

#### Linearity:

Horizontal: less than 4%  
Vertical: less than 4%

#### Convergence:

Center: 0.4 mm (typical)  
Peripheral: 0.5 mm (typical)

#### Raster size stability:

Horizontal: 1%  
Vertical: 1.5%

#### HV regulation:

3.5%

#### Color temperature:

D65, D93, User adjustable

#### Input/output

##### LINE A

Composite:  
Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75 Ω termination

##### Y/C\*:

Loop-through Mini Din 4-pin, automatic 75 Ω termination  
Y: 1.0 Vp-p, sync negative  
C: 0.286 Vp-p (NTSC) or 0.3 Vp-p (PAL)

##### Audio:

Phono, -5 dBu 47 kΩ or higher

##### LINE B

Composite:  
Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75 Ω termination

##### Audio:

Phono, -5 dBu 47 kΩ or higher

##### RGB/Component:

Loop-through BNC, automatic 75 Ω termination

##### G/Y:

0.7 Vp-p +3 dB/-6 dB

#### Sync on G:

0.3 Vp-p

#### B/B-Y:

0.7 Vp-p +3 dB/-6 dB

#### R/R-Y:

0.7 Vp-p +3 dB/-6 dB

#### External sync:

Loop-through BNC, automatic 75 Ω termination  
4.0 Vp-p ±6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p ±6 dB

#### Option slot:

x 1

#### Audio:

Phono (x 2), -5 dBu 47 kΩ or higher

#### Remote

Parallel remote:  
Modular 8-pin (assignable)  
Serial remote:  
D-sub 9-pin (RS-485)

#### Audio output:

0.8 W (distortion: less than 5%)

#### Regulation compliance

UL-1950/CSA-950, DHHS/DNHW, FCC Class A/IC Class A

#### Acceptable formats

480/60i (NTSC), 575/50i (PAL), 480/60P, 576/50P, 1080/50i, 1035/60i, 1080/60i, 720/60P

\* The Y/C input has priority over the composite input.

## Monitors

# PVM-20L5 Color Video Monitor

### Features

●20-inch\* color video monitor ●HR Trinitron CRT provides a high resolution of 800 TV lines ●SMPTE-C standard phosphors ●Beam current feedback circuit for stable color reproduction ●Multi-format signal support ●Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs available as standard ●1 slot available for optional input adaptors ●Accepts external sync ●Auto setup for chroma and phase ●Color temperature D65, D93 or user preset selectable ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Auto/manual degaussing ●Mountable into a 19-inch EIA standard rack with the optional Slide Rail

\* 19-inch viewable area, measured diagonally.



### Supplied Accessories

AC Power Cord (1)  
Operation Manual (1)

### Optional Accessories

BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
SLR-104 Slide Rail  
BKM-200M 16:9 Mask

### Specifications

#### General

Color system:  
NTSC, PAL  
Power requirements:  
AC 100 to 240 V, 50/60 Hz  
Power consumption (typical/with options):  
1.3 to 0.6 A, 130 W (with options: 1.4 to 0.7 A, 140 W)  
Operating temperature:  
0 to 35 °C (32 to 95 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
30 to 85% (no condensation)  
Dimensions:  
Approx. 452 (W) x 414 (H) x 500 (D) mm  
(17 7/8 x 16 3/8 x 19 3/4 inches)  
Mass:  
Approx. 31 kg (68 lb 5 oz)

#### CRT

CRT type:  
20-inch HR Trinitron  
AG pitch:  
0.31 mm  
Phosphor:  
SMPTE-C  
Effective picture size  
4:3:  
388.4 (W) x 292.6 (H) mm, 484.8 mm  
(diagonal)  
(15 3/8 x 11 5/8 inches, 19 1/8 inches)  
16:9:  
388.4 (W) x 228 (H) mm, 443 mm  
(diagonal)  
(15 3/8 x 9 inches, 17 1/2 inches)  
Resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines

#### Aperture correction:

OFF: 0 dB, ON: 2 to 6 dB  
Frequency response:  
LINE: 10.0 MHz +0 dB/-3 dB (Y signal only)  
RGB: 10.0 MHz +0 dB/-3 dB

#### Synchronization:

AFC time constant 1.0 ms

#### Scanning frequency:

15.625 kHz to 45 kHz

#### Normal scan:

7% overscan

#### Underscan:

5% underscan

#### Linearity:

Horizontal: less than 5%  
Vertical: less than 5%

#### Color temperature:

D65, D93, User adjustable

#### Convergence:

Center: 0.5 mm (typical)  
Peripheral: 0.7 mm (typical)

#### Raster size stability:

Horizontal: 1%  
Vertical: 1.5%

#### HV regulation:

4%

#### Input/output

##### LINE A

Composite:  
Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

##### Y/C\*:

Loop-through Mini Din 4-pin, automatic 75  $\Omega$  termination  
Y: 1.0 Vp-p, sync negative  
C: 0.3 Vp-p (PAL) or 0.286 Vp-p (NTSC)

##### Audio:

Phono, -5 dBu 47 k $\Omega$  or higher

##### LINE B

Composite:  
Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

##### Audio:

Phono, -5 dBu 47 k $\Omega$  or higher

#### RGB/Component:

Loop-through BNC, automatic 75  $\Omega$  termination  
G/Y:  
0.7 Vp-p +3 dB/-6 dB  
Sync on G:  
0.3 Vp-p  
B/B-Y:  
0.7 Vp-p +3 dB/-6 dB  
R/R-Y:  
0.7 Vp-p +3 dB/-6 dB

#### External sync:

Loop-through BNC, automatic 75  $\Omega$  termination  
4.0 Vp-p  $\pm$ 6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p  $\pm$ 6 dB

#### Option slot:

x 1

#### Audio:

Phono (x 2), -5 dBu 47 k $\Omega$  or higher

#### Remote

Parallel remote:  
Modular 8-pin (assignable)  
Serial remote:  
D-sub 9-pin (RS-485)

#### Audio output:

0.8 W (distortion: less than 5%)

#### Regulation compliance

UL-1950/CSA-950, DHHS/DNHW, FCC Class A/IC Class A

#### Acceptable formats

480/60I (NTSC), 575/50I (PAL), 480/60P, 576/50P, 1035/60I, 1080/60I, 720/60P

\* The Y/C input has priority over the composite input.

## Monitors

# PVM-20L4 Color Video Monitor

### Features

●20-inch\* color video monitor ●HR Trinitron CRT provides a high resolution of 800 TV lines ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs available as standard ●1 slot available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Color temperature D65, D93 or user preset selectable ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Parallel and serial remote control capability ●Auto/manual degaussing ●Mountable into a 19-inch EIA standard rack with the optional Slide Rail

\* 19-inch viewable area, measured diagonally.



### Supplied Accessories

AC Power Cord (1)  
Operation Manual (1)

### Optional Accessories

BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-14L Auto Setup Probe  
SLR-104 Slide Rail  
BKM-200M 16:9 Mask

### Specifications

#### General

Color system:  
PAL, SECAM, NTSC, NTSC4.43  
Power requirements:  
AC 100 to 240 V, 50/60 Hz  
Power consumption (typical/with options):  
1.2 to 0.5 A, 115 W (with options: 1.3 to 0.6 A, 120 W)  
Operating temperature:  
0 to 35 °C (32 to 95 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
30 to 85% (no condensation)  
Dimensions:  
Approx. 452 (W) x 414 (H) x 500 (D) mm  
(17 7/8 x 16 3/8 x 19 3/4 inches)  
Mass:  
Approx. 31 kg (68 lb 5 oz)

#### CRT

CRT type:  
20-inch HR Trinitron  
AG pitch:  
0.31 mm  
Phosphor:  
EBU  
Effective picture size  
4:3:  
388.4 (W) x 292.6 (H) mm, 484.8 mm  
(diagonal)  
(15 3/8 x 11 5/8 inches, 19 1/8 inches)  
16:9:  
388.4 (W) x 228 (H) mm, 443 mm  
(diagonal)  
(15 3/8 x 9 inches, 17 1/2 inches)

Resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines  
Aperture correction:  
OFF: 0 dB, ON: 2 to 6 dB  
Frequency response:  
LINE: 10.0 MHz +0 dB/-3 dB (Y signal only)  
RGB: 10.0 MHz +0 dB/-3 dB  
Synchronization:  
AFC time constant 1.0 ms  
Scanning frequency:  
15.625 kHz (PAL, SECAM), 15.734 kHz (NTSC, NTSC4.43)  
Normal scan:  
7% overscan  
Underscan:  
5% underscan  
Linearity:  
Horizontal: less than 5%  
Vertical: less than 5%  
Color temperature:  
D65, D93, User adjustable  
Convergence:  
Center: 0.5 mm (typical)  
Peripheral: 0.7 mm (typical)  
Raster size stability:  
Horizontal: 1%  
Vertical: 1.5%  
HV regulation:  
4%

#### Input/output

LINE A  
Composite:  
Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75 Ω termination  
Y/C\*:  
Loop-through Mini Din 4-pin, automatic 75 Ω termination  
Y: 1.0 Vp-p, sync negative  
C: 0.3 Vp-p (PAL) or 0.286 Vp-p (NTSC)  
Audio:  
Phono, -5 dBu 47 kΩ or higher  
LINE B  
Composite:  
Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75 Ω termination

#### Audio:

Phono, -5 dBu 47 kΩ or higher

#### RGB/Component:

Loop-through BNC, automatic 75 Ω termination

#### G/Y:

0.7 Vp-p +3 dB/-6 dB

#### Sync on G:

0.3 Vp-p

#### B/B-Y:

0.7 Vp-p +3 dB/-6 dB

#### R/R-Y:

0.7 Vp-p +3 dB/-6 dB

#### External sync:

Loop-through BNC, automatic 75 Ω termination  
4.0 Vp-p ±6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p ±6 dB

#### Option slot:

x 1

#### Audio:

Phono (x 2), -5 dBu 47 kΩ or higher

#### Remote

##### Parallel remote:

Modular 8-pin (assignable)

##### Serial remote:

D-sub 9-pin (RS-485)

#### Audio output:

0.8 W (distortion: less than 5%)

#### Regulation compliance

EN 60950, CE (LVD, EMC), C-Tick, CCIB

\* The Y/C input has priority over the composite input.

Monitors

## Monitors

# PVM-20L2 Color Video Monitor

### Features

- 20-inch\* color video monitor ●Trinitron CRT provides a high resolution of 600 TV lines\*Beam current feedback circuit for stable color reproduction\*Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs ●NTSC or PAL is detected automatically\*Optional input adaptor board available\*Accepts external sync\*Aspect ratio switchable between 4:3 and 16:9\*Auto setup for chroma and phase
- Color temperature D65, D93 or user preset selectable
- Underscan, blue only and tally functions ●Parallel and serial remote control capability ●Auto/manual degaussing
- Mountable into a 19-inch EIA standard rack with the optional slide rail kit

\* 19 inches viewable area, measured diagonally.



### Supplied Accessories

AC Cord (1)  
AC Plug Holder (1)  
Operation Manual (1)

### Optional Accessories

TU-1040E TV Tuner Unit  
TU-1041U TV Tuner Unit  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-126M PAL-M input adaptor  
SLR-103A Slide Rail  
SLR-103C Slide Rail

### Specifications

#### General

Color system:  
NTSC, PAL  
Power consumption (Typical/with options)  
98 W, 108 W (with BKM-150CP)  
Power requirements:  
AC 100 to 240 V, 50/60 Hz  
Operating temperature:  
0 to 35 °C (32 to 95 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Operating humidity:  
30 to 85% (No condensation)  
Storage humidity:  
0 to 90%  
Dimensions:  
453 (W) x 463 (H) x 529 (D) mm  
(17 7/8 x 18 1/4 x 20 7/8 inches)  
Mass:  
32.6 kg (72 lb 12 oz)

#### CRT

CRT type:  
20-inch Trinitron  
AG pitch:  
0.4 mm  
Phosphor:  
P-22  
Effective picture size (4:3)  
385.8 (W) x 290.6 (H) mm, 481.3  
(Diagonal) mm  
Resolution (4:3/16:9)  
600 TV lines

Aperture correction:  
0 to +6 dB  
Frequency response:  
10.0 MHz +0 dB/ -30 dB  
Synchronization:  
AFC time constant 1.0 ms  
Normal scan:  
7% overscan  
Underscan:  
5 % underscan  
Linearity:  
Horizontal: less than 5 %  
Vertical: less than 5 %  
Convergence:  
Center: 0.5 mm (typical)  
Peripheral: 0.7 mm (typical)  
Raster size stability:  
Horizontal: 1.0 %  
Vertical: 1.5 %  
HV regulation:  
4.0 %  
Color temperature:  
D65/D93/User adjustable

#### Inputs/Outputs

Line A  
Composite  
BNC, Loop-through, automatic 75  $\Omega$  termination  
1.0 Vp-p +3 dB/-6 dB, sync negative  
Y/C\*  
Mini Din 4-pin, Loop-through, automatic 75  $\Omega$  termination  
Y: 1.0 Vp-p, sync negative  
C: 0.286 Vp-p (NTSC) / 0.3 Vp-p (PAL)  
Audio  
Phono jack,  
-5 dBu 47 k  $\Omega$  or higher  
Line B  
Composite  
BNC, Loop-through, automatic 75  $\Omega$  termination  
1.0 Vp-p +3 dB/-6 dB, sync negative  
Audio  
Phono jack,  
-5 dBu 47 k  $\Omega$  or higher

#### RGB/Component:

BNC, Loop-through, automatic 75  $\Omega$  termination  
G/Y  
0.7 Vp-p +3 dB/-6 dB  
Sync on G  
0.3 Vp-p  
B/B-Y  
0.7 Vp-p +3 dB/-6 dB  
R/R-Y  
0.7 Vp-p +3 dB/-6 dB  
Audio  
Phono jack  
-5 dBu, 47 k  $\Omega$  or higher  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
4.0 Vp-p  $\pm$  6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p  $\pm$  6 dB  
Option slot  
1x  
Audio  
Phono jack x 2,  
-5 dBu 47 k  $\Omega$  or higher

#### Remote

Parallel remote  
Modular 8-pin (Assignable)  
Audio output  
0.8 W (Distortion: Less than 5%)

#### Regulation Compliance

Regulation Compliance  
UL-1950, CSA-950, EN 60950, VCCI class A, FCC class A, IC class A, C-Tick, CE (LVD), CE (EMC), JEITA, DHHS, DNHWW, CCC, KTL

#### Operating conditions

Operating temperature  
0 to +35° C (+32 to +95° F)  
Storage temperature  
10 to +40° C (+14 to +104° F)  
Operating humidity  
30 to 85% (No condensation)  
Storage humidity  
0 to 90%

\* The Y/C input has priority over the Composite input.

## Monitors

### PVM-20L1 Color Video Monitor

#### Features

- 20-inch\* color video monitor. ●Trinitron CRT provides a high resolution of 600 TV lines. ●Beam current feedback circuit for stable color reproduction. ●Composite and Y/C inputs. ●NTSC and PAL signals can be accepted. ●Aspect ratio switchable between 4:3 and 16:9. ●The color temperatures can be selected among high, low and users preset data that can be adjusted between 5000K and 10000K. ●Parallel remote control capability. ●Mountable into a 19-inch EIA standard rack with the optional slide rail kit.

\* 20 inches viewable area, measured diagonally.

#### Supplied Accessories

- AC Cord (1)
- Operation Instructions (1)

#### Optional Accessories

- SLR-103A Slide Rail
- SLR-103C Slide Rail



Monitors

Monitors

Specifications

General

Color system:  
NTSC, PAL

Power requirements:  
AC 100 to 240 V, 50/60 Hz

Power consumption (Typical)  
75 W

Operating temperature:  
0 to 35 °C (32 to 95 °F)

Storage temperature:  
-10 to 40 °C (14 to 104 °F)

Operating humidity:  
35 to 85% (No condensation)

Storage humidity:  
0 to 90%

Dimensions:  
Approx. 449 x 441 x 502 mm (17 3/4 x 17 3/8 x 19 7/8 inches)

Mass:  
Approx. 28.0 kg (61 lb 12 oz)

CRT  
CRT type\*:  
20-inch Trinitron

AG pitch:  
0.4 mm

Phosphor:  
P-22

Effective picture size (4:3)  
385.8 (W) x 290.6 (H) mm, 481.3 (Diagonal) mm

Center Resolution (Y/C input 4:3)  
600 TV lines

Frequency response  
8.0 MHz ( 0 -6 ) dB

Scanning frequency  
1 5.734 kHz (NTSC), 15.625 kHz (PAL)

Normal scan  
7% overscan

Linearity  
Horizontal  
Less than 8% (typical)

Vertical  
Less than 7% (typical)

Convergence  
Center  
0.5 mm (Typical)

Peripheral  
0.7 mm (Typical)

Raster size stability  
Horizontal  
1.0% (typical)

Vertical  
1.5% (typical)

HV regulation  
4.0% (typical)

Color temperature  
D65/D93/User adjustable

-Input/Output-

Line A  
Composite  
Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75 Ω termination

Y/C\*\*  
Loop-through Mini Din 4-pin, automatic 75 Ω termination

Y  
1.0 Vp-p, sync negative

Audio  
Phono jack, -5 dBu 47 kΩ or higher

Line B

Composite  
Loop-through BNC, 1.0 Vp-p, sync negative, automatic 75 Ω termination

Y/C\*\*  
Loop-through Mini Din 4-pin, automatic 75 Ω termination

Y  
1.0 Vp-p, sync negative

C  
0.286 Vp-p (NTSC), 0.3 Vp-p (PAL) 75 Ω termination

Audio  
Phono jack, -5 dBu 47 kΩ or higher

Remote  
Parallel remote  
Modular 8-pin (Fixed)

Audio output  
0.8 W (Distortion: Less than 5%)

Regulation Compliance  
UL-1950, CSA-950, EN 60950, VCCI class A, FCC class A, IC class A, C-Tick, CE (LVD), CE (EMC), JEITA, DHHS, DNHW, CCC, KTL, BSMI

\*Viewable area, measured diagonally. \*\* The Y/C input has priority over the composite input.

## Monitors

# PVM-14L5 Color Video Monitor

### Features

●14-inch\* color video monitor ●HR Trinitron CRT provides a high resolution of 800 TV lines ●SMPTE-C standard phosphors ●Beam current feedback circuit for stable color reproduction ●Multi-format signal support ●Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs available as standard ●1 slot available for optional input adaptors ●Accepts external sync ●Auto setup for chroma and phase ●Color temperature D65, D93 or user preset selectable ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Serial and parallel remote control capability ●Auto/manual degaussing ●Mountable into an EIA standard rack with the optional rack mounting bracket

\* 13 1/8-inch viewable area, measured diagonally.



### Supplied Accessories

AC Power Cord (1)  
Operation Manual (1)

### Optional Accessories

BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-142HD HD SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
MB-521 Mounting Bracket  
BKM-140M 16:9 Mask

### Specifications

#### General

Color system:  
NTSC, PAL  
Power requirements:  
AC 100 to 240 V, 50/60 Hz  
Power consumption:  
1.1 to 0.5 A, 110 W (with options: 1.2 to 0.6 A, 120 W)  
Operating temperature:  
0 to 35 °C (32 to 95 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
30 to 85% (no condensation)  
Dimensions:  
Approx. 346 (W) x 280 (H) x 424 (D) mm  
(13 5/8 x 11 1/8 x 16 3/4 inches)  
Mass:  
Approx. 17 kg (37 lb 8 oz)

#### CRT

CRT type:  
14-inch HR Trinitron  
AG pitch:  
0.25 mm  
Phosphor:  
SMPTE-C  
Effective picture size  
4:3:  
267.5 (W) x 200.6 (H) mm, 331.6 mm  
(diagonal)  
(10 5/8 x 8 inches, 13 1/8 inches)  
16:9:  
267.5 (W) x 150.5 (H) mm, 306.9 mm  
(diagonal)  
(10 5/8 x 6 inches, 12 1/8 inches)  
Resolution:  
4:3: 800 TV lines, 16:9: 600 TV lines

#### Aperture correction:

OFF: 0 dB, ON: 2 to 6 dB  
Frequency response:  
LINE: 10.0 MHz +0 dB/-3 dB (Y signal only)  
RGB: 10.0 MHz +0 dB/-3 dB  
Synchronization:  
AFC time constant 1.0 ms  
Scanning frequency:  
15.625 kHz to 45 kHz  
Normal scan:  
7% overscan

#### Underscan:

5% underscan  
Linearity:  
Horizontal: less than 4%  
Vertical: less than 4%  
Convergence:  
Center: 0.4 mm (typical)  
Peripheral: 0.5 mm (typical)

#### Raster size stability:

Horizontal: 1%  
Vertical: 1.5%

#### HV regulation:

3.5%

#### Color temperature:

D65, D93, User adjustable

#### Input/output

LINE A  
Composite:  
Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination  
Y/C\*:  
Loop-through Mini Din 4-pin, automatic 75  $\Omega$  termination  
Y: 1.0 Vp-p, sync negative  
C: 0.286 Vp-p (NTSC) or 0.3 Vp-p (PAL)  
Audio:  
Phono, -5 dBu 47 k $\Omega$  or higher

#### LINE B

Composite:  
Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination  
Audio:  
Phono, -5 dBu 47 k $\Omega$  or higher

#### RGB/Component:

Loop-through BNC, automatic 75  $\Omega$  termination  
G/Y:  
0.7 Vp-p +3 dB/-6 dB  
Sync on G:  
0.3 Vp-p  
B/B-Y:  
0.7 Vp-p +3 dB/-6 dB  
R/R-Y:  
0.7 Vp-p +3 dB/-6 dB  
External sync:  
Loop-through BNC, automatic 75  $\Omega$  termination  
4.0 Vp-p  $\pm$ 6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p  $\pm$ 6 dB  
Option slot:  
x 1  
Audio:  
Phono (x 2), -5 dBu 47 k $\Omega$  or higher  
Remote  
Parallel remote:  
Modular 8-pin (assignable)  
Serial remote:  
D-sub 9-pin (RS-485)  
Audio output:  
0.8 W (distortion: less than 5%)

#### Regulation compliance

UL-1950/CSA-950, DHHS/DNHW, FCC Class A/IC Class A

#### Acceptable formats

480/60I (NTSC), 575/50I (PAL), 480/60P, 576/50P, 1035/60I, 1080/60I, 720/60P

\* The Y/C input has priority over the composite input.

## Monitors

# PVM-14L4 Color Video Monitor

### Features

●14-inch\* color video monitor ●HR Trinitron CRT provides a high resolution of 800 TV lines ●EBU standard phosphors ●Beam current feedback circuit for stable color reproduction ●Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs available as standard ●1 slot available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Color temperature D65, D93 or user preset selectable ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions ●Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker ●Serial and parallel remote control capability ●Auto/manual degaussing ●Mountable into an EIA standard rack with the optional rack mounting bracket

\* 13 1/8-inch viewable area, measured diagonally.



### Supplied Accessories

AC Power Cord (1)  
Operation Manual (1)

### Optional Accessories

BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-14L Auto Setup Probe  
MB-521 Mounting Bracket  
BKM-140M 16:9 Mask

### Specifications

#### General

Color system:  
PAL, SECAM, NTSC, NTSC4.43  
Power requirements:  
AC 100 to 240 V, 50/60 Hz  
Power consumption:  
0.9 to 0.5 A, 90 W (with options: 1.0 to 0.6 A, 95 W)  
Operating temperature:  
0 to 35 °C (32 to 95 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
30 to 85% (no condensation)  
Dimensions:  
Approx. 346 (W) x 280 (H) x 424 (D) mm  
(13 5/8 x 11 1/8 x 16 3/4 inches)  
Mass:  
Approx. 17 kg (37 lb 8 oz)

#### CRT

CRT type:  
14-inch HR Trinitron  
AG pitch:  
0.25 mm  
Phosphor:  
EBU

#### Effective picture size

4:3:  
267.5 (W) x 200.6 (H) mm, 331.6 mm  
(diagonal)  
(10 5/8 x 8 inches, 13 1/8 inches)  
16:9:  
267.5 (W) x 150.5 (H) mm, 306.9 mm  
(diagonal)  
(10 5/8 x 6 inches, 12 1/8 inches)

#### Resolution:

4:3: 800 TV lines, 16:9: 600 TV lines

#### Aperture correction:

OFF: 0 dB, ON: 2 to 6 dB

#### Frequency response:

LINE: 10.0 MHz +0 dB/-3 dB (Y signal only)  
RGB: 10.0 MHz +0 dB/-3 dB

#### Synchronization:

AFC time constant 1.0 ms

#### Scanning frequency:

15.625 kHz (PAL, SECAM), 15.734 kHz (NTSC, NTSC4.43)

#### Normal scan:

7% overscan

#### Underscan:

5% underscan

#### Linearity:

Horizontal: less than 4%  
Vertical: less than 4%

#### Convergence:

Center: 0.4 mm (typical)  
Peripheral: 0.5 mm (typical)

#### Raster size stability:

Horizontal: 1%  
Vertical: 1.5%

#### HV regulation:

3.5%

#### Color temperature:

D65, D93, User adjustable

#### Input/output

##### LINE A

###### Composite:

Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

###### Y/C\*:

Loop-through Mini Din 4-pin, automatic 75  $\Omega$  termination  
Y: 1.0 Vp-p, sync negative  
C: 0.3 Vp-p (PAL) or 0.286 Vp-p (NTSC)

###### Audio:

Phono, -5 dBu 47 k $\Omega$  or higher

##### LINE B

###### Composite:

Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

###### Audio:

Phono, -5 dBu 47 k $\Omega$  or higher

#### RGB/Component:

Loop-through BNC, automatic 75  $\Omega$  termination

#### G/Y:

0.7 Vp-p +3 dB/-6 dB

#### Sync on G:

0.3 Vp-p

#### B/B-Y:

0.7 Vp-p +3 dB/-6 dB

#### R/R-Y:

0.7 Vp-p +3 dB/-6 dB

#### External sync:

Loop-through BNC, automatic 75  $\Omega$  termination  
4.0 Vp-p  $\pm$ 6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p  $\pm$ 6 dB

#### Option slot:

x 1

#### Audio:

Phono (x 2), -5 dBu 47 k $\Omega$  or higher

#### Remote

##### Parallel remote:

Modular 8-pin (assignable)

##### Serial remote:

D-sub 9-pin (RS-485)

#### Audio output:

0.8 W (distortion: less than 5%)

#### Regulation compliance

EN 60950, CE (LVD, EMC), C-Tick, CCIB

\* The Y/C input has priority over the composite input.

## Monitors

# PVM-14L3 Color Video Monitor

### Features

- 14-inch\* color video monitor ●Trinitron CRT provides a high resolution of 600 TV lines ●P-22 phosphors ●Beam current feedback circuit for stable color reproduction
- Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs available as standard ●1 slot available for optional input adaptors ●Accepts external sync ●Auto setup for chroma, phase and white balance ●Color temperature D65, D93 or user preset selectable ●Built-in H/V delay, underscan, blue only, mono and 3 color tally functions
- Aspect ratio 4:3 and 16:9 switchable ●4:3 area marker
- Serial and parallel remote control capability
- Auto/manual degaussing ●Mountable into an EIA standard rack with the optional rack mounting bracket

\* 13 1/8-inch viewable area, measured diagonally.



### Supplied Accessories

- AC Power Cord (1)
- Operation Manual (1)

### Optional Accessories

- BKM-150CP SDTI-CP/SD-SDI Input Adaptor
- BKM-120D SD-SDI 4:2:2 Input Adaptor
- BKM-129X Analog Component Input Adaptor
- BKM-14L Auto Setup Probe
- MB-521 Mounting Bracket
- BKM-140M 16:9 Mask

### Specifications

#### General

- Color system: PAL, SECAM, NTSC, NTSC4.43
- Power requirements: AC 100 to 240 V, 50/60 Hz
- Power consumption: 0.9 to 0.5 A, 90 W (with options: 1.0 to 0.6 A, 95 W)
- Operating temperature: 0 to 35 °C (32 to 95 °F)
- Storage temperature: -10 to 40 °C (14 to 104 °F)
- Humidity: 30 to 85% (no condensation)
- Dimensions: Approx. 346 (W) x 280 (H) x 424 (D) mm (13 5/8 x 11 1/8 x 16 3/4 inches)
- Mass: Approx. 17 kg (37 lb 8 oz)

#### CRT

- CRT type: 14-inch Trinitron
- AG pitch: 0.25 mm
- Phosphor: P-22
- Effective picture size
  - 4:3: 267.5 (W) x 200.6 (H) mm, 331.6 mm (diagonal) (10 5/8 x 8 inches, 13 1/8 inches)
  - 16:9: 267.5 (W) x 150.5 (H) mm, 306.9 mm (diagonal) (10 5/8 x 6 inches, 12 1/8 inches)
- Resolution: 600 TV lines
- Aperture correction: OFF: 0 dB, ON: 2 to 6 dB

#### Frequency response:

- LINE: 10.0 MHz +0 dB/-3 dB (Y signal only)
- RGB: 10.0 MHz +0 dB/-3 dB

#### Synchronization:

- AFC time constant 1.0 ms

#### Scanning frequency:

- 15.625 kHz (PAL, SECAM), 15.734 kHz (NTSC, NTSC4.43)

#### Normal scan:

- 7% overscan

#### Underscan:

- 5% underscan

#### Linearity:

- Horizontal: less than 4%
- Vertical: less than 4%

#### Convergence:

- Center: 0.4 mm (typical)
- Peripheral: 0.5 mm (typical)

#### Raster size stability:

- Horizontal: 1%
- Vertical: 1.5%

#### HV regulation:

- 3.5%

#### Color temperature:

- D65, D93, User adjustable

#### Input/output

##### LINE A

- Composite: Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

##### Y/C\*:

- Loop-through Mini Din 4-pin, automatic 75  $\Omega$  termination
- Y: 1.0 Vp-p, sync negative
- C: 0.3 Vp-p (PAL) or 0.286 Vp-p (NTSC)

##### Audio:

- Phono, -5 dBu 47 k $\Omega$  or higher

##### LINE B

- Composite: Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

##### Audio:

- Phono, -5 dBu 47 k $\Omega$  or higher

##### RGB/Component:

- Loop-through BNC, automatic 75  $\Omega$  termination

##### G/Y:

- 0.7 Vp-p +3 dB/-6 dB

#### Sync on G:

- 0.3 Vp-p

#### B/B-Y:

- 0.7 Vp-p +3 dB/-6 dB

#### R/R-Y:

- 0.7 Vp-p +3 dB/-6 dB

#### External sync:

- Loop-through BNC, automatic 75  $\Omega$  termination
- 4.0 Vp-p  $\pm$ 6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p  $\pm$ 6 dB

#### Option slot:

- x 1

#### Audio:

- Phono (x 2), -5 dBu 47 k $\Omega$  or higher

#### Remote

- Parallel remote: Modular 8-pin (assignable)
- Serial remote: D-sub 9-pin (RS-485)

#### Audio output:

- 0.8 W (distortion: less than 5%)

#### Regulation compliance

- EN 60950, CE (LVD, EMC), C-Tick, CCIB

\* The Y/C input has priority over the composite input.

## Monitors

# PVM-14L2 Color Video Monitor

### Features

- 14-inch\* color video monitor ●Trinitron CRT provides a high resolution of 600 TV lines\*Beam current feedback circuit for stable color reproduction\*Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs ●NTSC or PAL is detected automatically\*Optional input adaptor board available\*Accepts external sync\*Aspect ratio switchable between 4:3 and 16:9\*Auto setup for chroma and phase
- Color temperature D65, D93 or user preset selectable
- Underscan, blue only and tally functions ●Parallel and serial remote control capability ●Auto/manual degaussing
- Mountable into a 19-inch EIA standard rack with the optional slide rail kit

\* 13 inches viewable area, measured diagonally.



### Supplied Accessories

AC Cord (1)  
AC Plug Holder (1)  
Operation Manual (1)

### Optional Accessories

BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-126M PAL-M input adaptor  
TU-1040E TV Tuner Unit  
MB-502B Mounting Bracket  
MB-502C Mounting Bracket  
SLR-102 Slide Rail  
TU-1041U TV Tuner Unit

### Specifications

#### General

Color system:  
NTSC, PAL

Power consumption (Typical/with options)  
75 W, 86 W (with BKM-150CP)

Power requirements:  
AC 100 to 240 V, 50/60 Hz

Operating temperature:  
0 to 35 °C (32 to 95 °F)

Storage temperature:  
-10 to 40 °C (14 to 104 °F)

Operating humidity:  
30 to 85% (No condensation)

Storage humidity:  
0 to 90%

Dimensions:  
346 (W) x 340 (H) x 430 (D) mm  
(13 5/8 x 13 1/2 x 17 inches)

Mass:  
18.0 kg (39 lb 11 oz)

**CRT**

CRT type:  
14-inch Trinitron

AG pitch:  
0.25 mm

Phosphor:  
P-22

Effective picture size (4:3)  
267.5 (W) x 200.6 (H) mm, 340.0  
(Diagonal) mm

Resolution (4:3/16:9)  
600 TV lines

Aperture correction:  
0 to +6 dB

Frequency response:  
10.0 MHz, +0 dB/-3 dB

Synchronization:  
AFC time constant 1.0 ms

Normal scan:  
7% overscan

Underscan:  
5 % underscan

Linearity:  
Horizontal: less than 4 %  
Vertical: less than 4 %

Convergence:  
Center: 0.4 mm (typical)  
Peripheral: 0.5 mm (typical)

Raster size stability:  
Horizontal: 1.0 %  
Vertical: 1.5 %

HV regulation:  
3.5 %

Color temperature:  
D65/D93/User adjustable

#### Inputs/outputs

**Line A**

Composite  
BNC, Loop-through, automatic 75  $\Omega$  termination  
1.0 Vp-p +3 dB/-6 dB, sync negative

Y/C\*  
Mini Din 4-pin, Loop-through, automatic 75  $\Omega$  termination  
Y: 1.0 Vp-p, sync negative  
C: 0.286 Vp-p (NTSC) / 0.3 Vp-p (PAL)

**Audio**  
Phono jack,  
-5 dBu 47 k $\Omega$  or higher

**Line B**

Composite  
BNC, Loop-through, automatic 75  $\Omega$  termination  
1.0 Vp-p +3 dB/-6 dB, sync negative

**Audio**  
Phono jack,  
-5 dBu 47 k $\Omega$  or higher

#### RGB/Component:

BNC, Loop-through, automatic 75  $\Omega$  termination  
G/Y  
0.7 Vp-p +3 dB/-6 dB  
Sync on G  
0.3 Vp-p  
B/B-Y  
0.7 Vp-p +3 dB/-6 dB  
R/R-Y  
0.7 Vp-p +3 dB/-6 dB  
**Audio**  
Phono jack  
-5 dBu, 47 k $\Omega$  or higher

**External sync:**  
BNC, Loop-through, automatic 75  $\Omega$  termination  
4.0 Vp-p  $\pm$  6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p  $\pm$  6 dB

**Option slot**  
1x  
**Audio**  
Phono jack x 2,  
-5 dBu 47 k $\Omega$  or higher

#### Remote

Parallel remote  
Modular 8-pin (Assignable)

**Audio output**  
0.8 W (Distortion: Less than 5%)

#### Regulation Compliance

Regulation compliance  
UL-1950, CSA-950, EN 60950, VCCI class A, FCC class A, IC class A, C-Tick, CE (LVD), CE (EMC), JEITA, DHHS, DNHWS, CCC, KTL

#### Operating conditions

Operating temperature  
0 to +35° C (+32 to +95° F)

Storage temperature  
10 to +40° C (+14 to +104° F)

Operating humidity  
30 to 85% (No condensation)

Storage humidity  
0 to 90%

\* The Y/C input has priority over the Composite input.

Monitors

PVM-14L1 Color Video Monitor

Features

- 14-inch\* color video monitor. ●Trinitron CRT provides a high resolution of 600 TV lines. ●Beam current feedback circuit for stable color reproduction. ●Composite and Y/C inputs. ●NTSC and PAL signals can be accepted. ●Aspect ratio switchable between 4:3 and 16:9. ●The color temperatures can be selected among high, low and users preset data that can be adjusted between 5000K and 10000K. ●Parallel remote control capability. ●Mountable into a 19-inch EIA standard rack with the optional mounting bracket.

\* 14 inches viewable area, measured diagonally.



Supplied Accessories

- AC Cord (1)
- Operation Instructions (1)

Optional Accessories

- MB-502B Mounting Bracket
- MB-502C Mounting Bracket
- SLR-102 Slide Rail

Specifications

General

- Color system: NTSC, PAL
- Power requirements: AC 100 to 240 V, 50/60 Hz
- Power consumption (Typical) 68 W
- Operating temperature: 0 to 35 °C (32 to 95 °F)
- Storage temperature: -10 to 40 °C (14 to 104 °F)
- Operating humidity: 35 to 85% (No condensation)
- Storage humidity: 0 to 90%
- Dimensions: Approx. 346 x 340 x 414 mm (13 5/8 x 13 1/2 x 16 3/8 inches)
- Mass: Approx. 15.0 kg (33 lb 1 oz)
- CRT
  - CRT type\*: 14-inch Trinitron
  - AG pitch: 0.25 mm
  - Phosphor: P-22
  - Effective picture size (4:3) 267.5 (W) x 200.6 (H) mm, 340.0 (Diagonal) mm
- Center Resolution (Y/C input 4:3) 600 TV lines
- Frequency response 8.0 MHz ( 0 -6 ) dB
- Scanning frequency 1 5.734 kHz (NTSC), 15.625 kHz (PAL)
- Normal scan 7% overscan

Linearity

- Horizontal Less than 8% (typical)
- Vertical Less than 7% (typical)
- Convergence
  - Center 0.4 mm (Typical)
  - Peripheral 0.5 mm (Typical)
- Raster size stability
  - Horizontal 1.0% (typical)
  - Vertical 1.5% (typical)
- HV regulation 3.5% (typical)
- Color temperature D65/D93/User adjustable
- Input/Output-
- Line A
  - Composite
    - Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

Raster size stability

- Horizontal 1.0% (typical)
- Vertical 1.5% (typical)
- HV regulation 3.5% (typical)
- Color temperature D65/D93/User adjustable
- Input/Output-
- Line A
  - Composite
    - Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75  $\Omega$  termination

Line B

- Composite
  - Loop-through BNC, 1.0 Vp-p, sync negative, automatic 75  $\Omega$  termination
- Y/C\*\*
  - Loop-through Mini Din 4-pin, automatic 75  $\Omega$  termination
- Y 1.0 Vp-p, sync negative
- Audio
  - Phono jack, -5 dBu 47 k $\Omega$  or higher

Line B

- Composite
  - Loop-through BNC, 1.0 Vp-p, sync negative, automatic 75  $\Omega$  termination
- Y/C\*\*
  - Loop-through Mini Din 4-pin, automatic 75  $\Omega$  termination
- Y 1.0 Vp-p, sync negative
- C 0.286 Vp-p (NTSC), 0.3 Vp-p (PAL) 75  $\Omega$  termination
- Audio
  - Phono jack, -5 dBu 47 k $\Omega$  or higher
- Remote
  - Parallel remote
  - Modular 8-pin (Fixed)

Audio output

- 0.8 W (Distortion: Less than 5%)

Regulation Compliance

- UL-1950, CSA-950, EN 60950, VCCI class A, FCC class A, IC class A, C-Tick, CE (LVD), CE (EMC), JEITA, DHHS, DNHW, CCC, KTL, BSMI

\*Viewable area, measured diagonally. \*\* The Y/C input has priority over the composite input.

## Monitors

### PVM-9L3 Color Video Monitor

The PVM-9L3 is an affordable 9-inch monitor using a Sony HR Trinitron CRT. With its compact design, excellent picture performance, full range of operational functions and high level of portability, the PVM-9L3 is designed to meet the demands of high-grade picture monitoring in a variety of program production applications.

#### Features

- High Resolution (450 TV lines/9-inch CRT), ●Standard Y/C and Composite inputs. ●Variety of Optional Inputs for SDI, SDTI-CP, DV, Analog Component and PAL-M signals
- Blue Only Mode, ●High-Quality Y/C Separation,
- Assignable Parallel Remote Port, ●High level of portability, ●On-Screen Display, ●Supports NTSC and PAL Color Systems, ●19-inch EIA standard rack mountable



#### Supplied Accessories

AC Plug Holder (1)  
Tally Number Plate (12)  
Operation Manual (1)

#### Optional Accessories

BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-155DV DV Input Adaptor  
BKM-126M PAL-M input adaptor  
MB-520 Mounting Bracket  
MB-509 Mounting Panel  
VF-508 Monitor ENG Kit  
BP-IL75 Rechargeable Lithium-ion Battery Pack  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BC-M50 Ni-MH & Li-ion Battery Charger  
BC-M150 Ni-MH & Li-ion Battery Charger  
TU-1041U TV Tuner Unit  
TU-1040E TV Tuner Unit

#### Specifications

##### General

CRT  
CRT type  
9-inch HR Trinitron  
AG pitch  
0.25 mm  
Phosphor  
P-22  
Effective picture size (4:3)  
159.5 (W) x 117.0 (H) mm  
194.9 mm (measured diagonally)  
Resolution (4:3/16:9)  
450 TV lines  
Color system  
PAL, NTSC  
Aperture correction  
0 to 6 dB  
Frequency response  
6.0 MHz +0 dB/-3 dB  
Synchronization  
AFC time constant 1.0 ms

Scanning frequency  
15.734 kHz (NTSC)  
15.625 kHz (PAL)

Normal scan

7% overscan

Underscan

5% underscan

Linearity

Horizontal

Less than 4%

Vertical

Less than 4%

Convergence

Center

0.4 mm (typical)

Peripheral area

0.5 mm (typical)

Raster size stability

Horizontal

1.0%

Vertical

1.5%

HV regulation

3.0%

Color temperature

D65/D93/User adjustable

Power requirements

AC 100 to 240 V, 50/60 Hz

Power consumption

AC:47 W, DC:38 W

AC:58 W, DC:48 W (with BKM-150CP)

Dimensions (W x H x D)

Approx. 217 x 218 x 373 mm

(8 5/8 x 8 5/8 x 14 3/4 inches)

Mass

Approx. 8.0 kg (17 lb 10 oz)

##### Input/Output

Line A

Composite

BNC, Loop-through, automatic 75  $\Omega$

termination

1.0 Vp-p +3 dB/-6 dB, sync negative

Y/C

Mini Din 4-pin, Loop-through, automatic

75  $\Omega$  termination

Y: 1.0 Vp-p, sync negative

C: 0.286 Vp-p (NTSC) / 0.3 Vp-p (PAL)

Audio

Phono jack

-5 dBu, 47 k $\Omega$  or higher

Line B

Composite

BNC, Loop-through, automatic 75  $\Omega$

termination

1.0 Vp-p +3 dB/-6 dB, sync negative

Audio

Phono jack

-5 dBu, 47 k $\Omega$  or higher

Ext. sync Input/Output

BNC, Loop-through, automatic 75  $\Omega$

termination

4.0 Vp-p  $\pm$  6 dB, sync negative, usable

tri-level sync signal 0.6 Vp-p  $\pm$  6 dB

Option slot

1x

Audio

Phono jack x 2

-5 dBu, 47 k $\Omega$  or higher

Remote

Parallel remote

Modular 8-pin (assignable)

Audio output

0.8 W (Distortion: Less than 5%)

Regulation Compliance

UL1950, CSA No.950, EN60950,

EN55103-1, EN55103-2, VCCI, FCC class

A, IC class A, C-Tick, CE, JEITA, DHHS,

DNHW, CCC, KTL

Operating conditions

Operating temperature

0 to +35°C (+32 to +95°F)

Storage temperature

-10 to +40°C (+14 to +104°F)

Operating humidity

30 to 85% (No condensation)

Storage humidity

0 to 90%

## Monitors

# PVM-9L2 Color Video Monitor

### Features

●9-inch\* color video monitor ●Trinitron CRT provides a high resolution of 250 TV lines\*Beam current feedback circuit for stable color reproduction\*Composite, Y/C, RGB and component (Y/R-Y/B-Y) inputs ●NTSC or PAL is detected automatically\*Optional input adaptor board available\*Accepts external sync\*Aspect ratio switchable between 4:3 and 16:9\*Auto setup for chroma and phase ●Color temperature D65, D93 or user preset selectable ●Underscan, blue only and tally functions ●Parallel and serial remote control capability ●Auto/manual degaussing ●Mountable into a 19-inch EIA standard rack with the optional slide rail kit

\* 8 inches viewable area, measured diagonally.



### Supplied Accessories

AC Cord (1)  
AC Plug Holder (1)  
Operation Manual (1)

### Optional Accessories

TU-1040E TV Tuner Unit  
TU-1041U TV Tuner Unit  
BKM-120D SD-SDI 4:2:2 Input Adaptor  
BKM-129X Analog Component Input Adaptor  
BKM-150CP SDTI-CP/SD-SDI Input Adaptor  
BKM-126M PAL-M input adaptor  
MB-520 Mounting Bracket  
MB-509 Mounting Panel  
VF-508 Monitor ENG Kit  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BC-L120 Lithium-ion Battery Charger  
BP-M50 Rechargeable Nickel Metal Hydride Battery Pack  
BP-M100 Rechargeable Nickel Metal Hydride Battery Pack  
BC-M50 Ni-MH & Li-ion Battery Charger

### Specifications

#### General

Color system:  
NTSC, PAL  
Power consumption:  
75 W, 86 W (with BKM-150CP)  
Power requirements:  
AC 100 to 240 V, 50/60 Hz  
Power consumption (Typical/with options)  
AC:47 W, DC:38 W AC:58 W, DC:48 W (with BKM-150CP)  
Operating temperature:  
0 to 35 °C (32 to 95 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Operating humidity:  
30 to 85% (No condensation)  
Storage humidity:  
0 to 90%  
Dimensions:  
217 (W) x 218 (H) x 373 (D) mm  
(8 5/8 x 8 5/8 x 14 3/4 inches)

#### Mass:

8.0 kg (17 lb 10 oz)

#### CRT

CRT type:  
9-inch Trinitron  
AG pitch:  
0.5 mm  
Phosphor:  
P-22  
Effective picture size (4:3)  
159.5 (W) x 117.0 (H) mm, 194.9 (Diagonal) mm  
Resolution (4:3/16:9)  
250 TV lines  
Aperture correction:  
0 to +6 dB  
Frequency response:  
6.0 MHz ( -30) dB  
Synchronization:  
AFC time constant 1.0 ms  
Normal scan:  
7% overscan  
Underscan:  
5 % underscan  
Linearity:  
Horizontal: less than 4 %  
Vertical: less than 4 %  
Convergence:  
Center: 0.4 mm (typical)  
Peripheral: 0.5 mm (typical)  
Raster size stability:  
Horizontal: 1.0 %  
Vertical: 1.5 %  
HV regulation:  
3.0 %  
Color temperature:  
D65/D93/User adjustable

#### Inputs/outputs

Line A  
Composite  
BNC, Loop-through, automatic 75  $\Omega$  termination  
1.0 Vp-p +3 dB/-6 dB, sync negative  
Y/C\*  
Mini Din 4-pin, Loop-through, automatic 75  $\Omega$  termination  
Y: 1.0 Vp-p, sync negative  
C: 0.286 Vp-p (NTSC) / 0.3 Vp-p (PAL)

#### Audio

Phono jack,  
-5 dBu 47 k $\Omega$  or higher

#### Line B

Composite  
BNC, Loop-through, automatic 75  $\Omega$  termination  
1.0 Vp-p +3 dB/-6 dB, sync negative

#### Audio

Phono jack,  
-5 dBu 47 k $\Omega$  or higher

#### External sync:

BNC, Loop-through, automatic 75  $\Omega$  termination  
4.0 Vp-p  $\pm$  6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p  $\pm$  6 dB

#### Option slot

1x

#### Audio

Phono jack x 2,  
-5 dBu 47 k $\Omega$  or higher

#### Remote

Parallel remote  
Modular 8-pin (Assignable)

#### Audio output

0.8 W (Distortion: Less than 5%)

#### Regulation Compliance

UL-1950, CSA-950, EN 60950, VCCI class A, FCC class A, IC class A, C-Tick, CE (LVD), CE (EMC), JEITA, DHHS, DNHW, CCC, KTL

#### Operating conditions

Operating temperature  
0 to +35° C (+32 to +95° F)  
Storage temperature  
10 to +40° C (+14 to +104° F)  
Operating humidity  
30 to 85% (No condensation)  
Storage humidity  
0 to 90%

\* The Y/C input has priority over the Composite input.

## Monitors

### PVM-9L1 Color Video Monitor

#### Features

- 9-inch\* color video monitor. ●Trinitron CRT provides a high resolution of 250 TV lines. ●Beam current feedback circuit for stable color reproduction\*Composite and Y/C inputs. ●NTSC and PAL signals can be accepted. ●Aspect ratio switchable between 4:3 and 16:9. ●The color temperatures can be selected among high, low and users preset data that can be adjusted between 5000K and 10000K. ●Parallel remote control capability. ●Mountable into a 19-inch EIA standard rack with the optional mounting bracket.

\* 9 inches viewable area, measured diagonally.

#### Supplied Accessories

AC Cord (1)

Operation Instructions (1)

#### Optional Accessories

MB-520 Mounting Bracket

MB-509 Mounting Panel



Monitors

Specifications

General

Color system:

NTSC, PAL

Power requirements:

AC 100 to 240 V, 50/60 Hz

Power consumption (Typical)

40 W

Operating temperature:

0 to 35 °C (32 to 95 °F)

Storage temperature:

-10 to 40 °C (14 to 104 °F)

Operating humidity:

35 to 85% (No condensation)

Storage humidity:

0 to 90%

Dimensions:

Approx. 217 x 218 x 350 mm (8 5/8 x 8 5/8

x 13 7/8 inches)

Mass:

Approx. 6.3 kg (13 lb 14 oz)

CRT

CRT type\*:

9-inch Trinitron

AG pitch:

0.5 mm

Phosphor:

P-22

Effective picture size (4:3)

159.5 (W) x 117.0 (H) mm, 194.5

(Diagonal) mm

Center Resolution (Y/C input 4:3)

250 TV lines

Frequency response

4.0 MHz ( 0 -6 ) dB

Scanning frequency

1 5.734 kHz (NTSC), 15.625 kHz (PAL)

Normal scan

6% overscan

Linearity

Horizontal

Less than 8% (typical)

Vertical

Less than 7% (typical)

Convergence

Center

0.4 mm (Typical)

Peripheral

0.5 mm (Typical)

Raster size stability

Horizontal

1.0% (typical)

Vertical

1.5% (typical)

HV regulation

3.0% (typical)

Color temperature

D65/D93/User adjustable

-Input/Output-

Line A

Composite

Loop-through BNC, 1.0 Vp-p +3 dB/-6

dB, sync negative, automatic 75  $\Omega$

termination

Y/C\*\*

Loop-through Mini Din 4-pin, automatic

75  $\Omega$  termination

Y

1.0 Vp-p, sync negative

Audio

Phono jack, -5 dBu 47 k $\Omega$  or higher

Remote

Parallel remote

Modular 8-pin (Fixed)

Audio output

0.8 W (Distortion: Less than 5%)

Regulation Compliance

UL-1950, CSA-950, EN 60950, VCCI class

A, FCC class A, IC class A, C-Tick, CE

(LVD), CE (EMC), JEITA, DHHS, DNHW,

CCC, KTL, BSMI

\*Viewable area, measured diagonally. \*\* The Y/C input has priority over the composite input.

## Monitors

# PVM-6041QM Color Video Monitor

### Features

●6-inch\* color video monitor ●Trinitron CRT provides a resolution of 250 TV lines ●Beam current feedback circuit for stable color reproduction ●Composite, RGB and component (Y/R-Y/B-Y) inputs ●Accepts external sync ●Color temperature D65 ●Built-in H/V delay, underscan, blue only and tally functions ●Aspect ratio 4:3 and 16:9 switchable ●Wired remote control capability ●Mountable into a 19-inch EIA standard rack with another two units of PVM-6041QM (or two optional blank panels) and the optional rack mounting bracket ●AC/DC operation capability

\* 5 inches viewable area, measured diagonally.



### Supplied Accessories

AC Power Cord (1)  
Mini DIN 8-pin Connector with Cable (1)  
Operation Manual (1)

### Optional Accessories

MB-508 Mounting Panel  
MB-520 Mounting Bracket  
VF-504 Monitor ENG Kit  
TU-1040E TV Tuner Unit  
DC-L10 Battery Adaptor  
NP-1B Rechargeable battery pack  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-90A Rechargeable Ni-Cd Battery Pack  
DC-210 Battery Case  
BC-1WDCE Battery Charger  
BC-410CE Battery Charger  
DCC-XLR4 Car Battery Cord

### Specifications

#### General

Color system:  
PAL, NTSC, SECAM, NTSC4.43  
Power requirements:  
AC: 100 to 240 V, 0.7 to 0.4 A, 50/60 Hz  
DC: 12 V, 3.2 A  
Power consumption:  
AC/DC: 40 W (typical)  
Operating temperature:  
0 to 35 °C (32 to 95 °F)  
Storage temperature:  
-10 to 40 °C (14 to 104 °F)  
Humidity:  
0 to 90% (no condensation)  
Dimensions:  
Approx. 146 (W) x 173 (H) x 352.5 (D) mm  
(5 3/4 x 6 7/8 x 14 inches)  
Mass:  
Approx. 5.5 kg (12 lb 2 oz)  
CRT  
CRT type:  
6-inch Trinitron CRT  
AG pitch:  
0.4 mm, 70° deflection  
Visible picture size:  
12.7 cm (diagonal) (5 inches)  
Resolution:  
Composite video: 250 TV lines  
Frequency response:  
6.0 MHz (-3 dB)  
Synchronization:  
AFC time constant 1.0 ms  
Normal scan:  
6% overscan

#### Underscan:

3% underscan

#### Linearity:

Horizontal: less than 7% (typical)  
Vertical: less than 7% (typical)

#### Convergence:

Center: 0.5 mm (typical)  
Corner: 0.6 mm (typical)

#### Raster size stability:

2.0% (typical)

#### HV regulation:

3.0% (cut off to high light)

#### Color temperature:

D65

#### Inputs/outputs

##### LINE

##### Composite:

Loop-through BNC, 1.0 Vp-p  $\pm 6$  dB, sync negative, automatic 75  $\Omega$  termination\*

##### Audio:

Loop-through phono, -5 dBu, high impedance

##### RGB/Component:

##### BNC

##### R/R-Y:

Non-composite: 0.7 Vp-p  $\pm 6$  dB, sync positive, 75  $\Omega$

##### Sync on G/G/Y:

Composite: 1.0 Vp-p  $\pm 6$  dB, sync negative  
Non-composite: 0.7 Vp-p  $\pm 6$  dB, sync positive, 75  $\Omega$

##### B/B-Y:

Non-composite: 0.7 Vp-p  $\pm 6$  dB, sync positive, 75  $\Omega$

##### Audio:

Phono, -5 dBu, high impedance

##### External sync:

BNC, 4.0 Vp-p  $\pm 6$  dB, sync negative, automatic 75  $\Omega$  termination\*

##### DC:

XLR 4-pin

##### Remote:

Mini DIN 8-pin (with tally)

##### Audio out:

0.5 W (monaural)

#### Regulation compliance

EN 60 950 (TUV), CE (EMC, LVD), C-Tick

\* 75  $\Omega$  termination is automatically set to OFF when a connection is made to the OUT connector.



## Monitors

# PVM-5041Q Color Video Monitor

### Features

- 6-inch\* color video monitor ●Trinitron CRT provides a resolution of 250 TV lines ●Beam current feedback circuit for stable color reproduction ●Composite, RGB and component (Y/R-Y/B-Y) inputs ●Accepts external sync
- Color temperature D65 ●Built-in H/V delay, underscan, blue only and tally functions ●Aspect ratio 4:3 and 16:9 switchable ●Wired remote control capability ●Mountable into a 19-inch EIA standard rack with another two units of PVM-5041Q (or two optional blank panels) and the optional rack mounting bracket ●AC/DC operation capability

\* 5 inches viewable area, measured diagonally.

### Supplied Accessories

AC Power Cord (1)  
Mini DIN 8-pin Connector with Cable (1)  
Operation Manual (1)

### Optional Accessories

MB-508 Mounting Panel  
MB-520 Mounting Bracket  
VF-504 Monitor ENG Kit  
TU-1041U TV Tuner Unit  
DC-L10 Battery Adaptor  
NP-1B Rechargeable battery pack  
BP-L60A Rechargeable Lithium-ion Battery Pack  
BP-L90A Rechargeable Lithium-ion Battery Pack  
BP-90A Rechargeable Ni-Cd Battery Pack  
DC-210 Battery Case  
BC-1WDCE Battery Charger  
BC-410CE Battery Charger  
DCC-XLR4 Car Battery Cord



Monitors

Monitors

Specifications

General

Color system:  
NTSC, PAL, SECAM, NTSC4.43

Power requirements:  
AC: 100 to 240 V\*1, 0.7 to 0.4 A, 50/60 Hz  
DC: 12 V, 3.2 A

Power consumption:  
AC/DC: 40 W (typical)

Operating temperature:  
0 to 35 °C (32 to 95 °F)

Storage temperature:  
-10 to 40 °C (14 to 104 °F)

Humidity:  
0 to 90% (no condensation)

Dimensions:  
Approx. 146 (W) x 173 (H) x 352.5 (D) mm  
(5 3/4 x 6 7/8 x 14 inches)

Mass:  
Approx. 5.5 kg (12 lb 2 oz)

CRT

CRT type:  
6-inch Trinitron CRT

AG pitch:  
0.4 mm, 70° deflection

Visible picture size:  
12.7 cm (diagonal) (5 inches)

Resolution:  
Composite video: 250 TV lines

Frequency response:  
6.0 MHz (-3 dB)

Synchronization:  
AFC time constant 1.0 ms

Normal scan:  
6% overscan

Underscan:  
3% underscan

Linearity:  
Horizontal: less than 7% (typical)  
Vertical: less than 7% (typical)

Convergence:  
Center: 0.5 mm (typical)  
Corner: 0.6 mm (typical)

Raster size stability:  
2.0% (typical)

HV regulation:  
3.0% (cut off to high light)

Color temperature:  
D65

Inputs/outputs

LINE

Composite:  
Loop-through BNC, 1.0 Vp-p ±6 dB,  
sync negative, automatic 75 Ω  
termination\*2

Audio:  
Loop-through phono, -5 dBu, high  
impedance

RGB/Component:

BNC

R/R-Y:  
Non-composite: 0.7 Vp-p ±6 dB, sync  
positive, 75 Ω

Sync on G/G/Y:  
Composite: 1.0 Vp-p ±6 dB, sync  
negative  
Non-composite: 0.7 Vp-p ±6 dB, sync  
positive, 75 Ω

B/B-Y:  
Non-composite: 0.7 Vp-p ±6 dB, sync  
positive, 75 Ω

Audio:  
Phono, -5 dBu, high impedance

External sync:  
BNC, 4.0 Vp-p ±6 dB, sync negative,  
automatic 75 Ω termination\*2

DC:  
XLR 4-pin

Remote:  
Mini DIN 8-pin (with tally)

Audio out:  
0.5 W (monaural)

**Regulation compliance**  
UL-6500 listed, c-UL (CAN/CSA-E65-94),  
FCC Class-A, IC Class-A, DHHS, DNHW

\*1 UL approved for 120 V operation. \*2 75 Ω  
termination is automatically set to OFF when a  
connection is made to the OUT connector.



Monitors

## Monitors

# PVM-146E Black and White Video Monitor

### Features

●14-inch\* black and white video monitor ●CCIR/EIA automatic selection ●High resolution of 1000 TV lines ●Composite input ●Accepts external sync ●Color temperature D65 ●Built-in H/V delay, underscan, notch filter and tally functions ●Aspect ratio 4:3 and 16:9 switchable ●Built-in speaker ●Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket and slide rail kit

\* 13 inches viewable area, measured diagonally.

### Supplied Accessories

AC Power Cord (1)  
AC Plug Holders (1)  
Number Plate (1 set) (1)  
Remote Connector 8-pin (1)  
Operation Manual (1)

### Optional Accessories

MB-502B Mounting Bracket  
SLR-102 Slide Rail

### Specifications

#### General

##### System:

CCIR 625 lines/50 fields, EIA 525 lines/60 fields  
(automatically selected)

##### Power requirements:

120 V, 50/60 Hz

##### Power consumption:

Max. 30 W

##### Operating temperature:

0 to 35 °C (32 to 95 °F)

##### Dimensions:

346 (W) x 340 (H) x 330 (D) mm  
(13 5/8 x 13 1/2 x 13 inches)

##### Mass:

11 kg (24 lb 4 oz)

##### Picture tube:

34.0 cm (14 inches), 32.1 cm (13 inches)  
viewable area measured diagonally, 90° deflection

##### Color temperature:

D65

##### Resolution:

1000 TV lines

##### Frequency response:

-3 dB at 10 MHz

##### Normal scan:

8% overscan

##### Underscan:

3% underscan

##### Linearity:

Horizontal: less than 8%  
Vertical: less than 7%

#### Inputs/outputs

##### Video:

Loop-through BNC, 1.0 Vp-p, sync negative, 75  $\Omega$  termination

##### Audio:

Loop-through phono, -5 dB, high impedance, monaural

##### External sync:

Loop-through BNC, 1.0 to 4.0 Vp-p negative, 75  $\Omega$  termination

##### Audio power output:

0.5 W



## Monitors

# PVM-145E Black and White Video Monitor

### Features

- 14-inch\* black and white video monitor
- CCIR/EIA automatic selection
- A high resolution of 1000 TV lines
- Composite input
- Accepts external sync
- Built-in speaker
- Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket and slide rail kit

\* 13 inches viewable area, measured diagonally.

### Supplied Accessories

- AC Power Cord (1)
- AC Plug Holders (1)
- Operation Manual (1)

### Optional Accessories

- MB-502B Mounting Bracket
- SLR-102 Slide Rail

### Specifications

#### General

##### System:

- CCIR 625 lines/50 fields, EIA 525 lines/60 fields
- (automatically selected)

##### Power requirements:

- 120 V, 50/60 Hz

##### Power consumption:

- Max. 30 W

##### Operating temperature:

- 0 to 35 °C (32 to 95 °F)

##### Dimensions:

- 346 (W) x 340 (H) x 330 (D) mm
- (13 5/8 x 13 1/2 x 13 inches)

##### Mass:

- 11 kg (24 lb 4 oz)

##### Picture tube:

- 34.0 cm (14 inches), 32.1 cm (13 inches)
- viewable area measured diagonally, 90° deflection

##### Color temperature:

- D65

##### Resolution:

- 1000 TV lines

##### Frequency response:

- 3 dB at 10 MHz

##### Normal scan:

- 8% overscan

##### Underscan:

- 3% underscan

##### Linearity:

- Horizontal: less than 8%
- Vertical: less than 7%

### Inputs/outputs

#### Video:

- Loop-through BNC, 1.0 Vp-p, sync negative, 75  $\Omega$  termination

#### Audio:

- Loop-through phono, -5 dB, high impedance, monaural

#### External sync:

- Loop-through BNC, 1.0 to 4.0 Vp-p negative, 75  $\Omega$  termination

#### Audio power output:

- 0.5 W



## Monitors

# PVM-137 Black & White Monitor

### Features

- EIA/CCIR automatic selection ●A high resolution of 1000 TV lines at center ●Underscan capability ●Built-in speaker for audio monitoring ●Accepts external sync ●Tally input ●Rack mountable with the optional Mounting Bracket MB-502B and Slide Rail Kit SLR-102

### Supplied Accessories

- AC Power Cord (1)
- AC Plug Holders (1)
- Number Plate (1 set) (1)
- Operation Manual (1)

### Optional Accessories

- MB-502B Mounting Bracket
- SLR-102 Slide Rail

### Specifications

#### General

Video signal system:

- EIA 525 lines, 60 fields /CCIR 625 lines, 50 fields
- (switching of EIA to CCIR or vice versa is automatically done)

Picture tube:

- 34.0 cm (14-inch) CRT, 32.1 cm (13-inch) visible picture measured diagonally, 90° deflection

Horizontal resolution:

- 1000 TV lines at center

Audio power output:

- Monaural, 0.5 W with built-in speaker

Power requirements:

- AC 120 V, 50/60 Hz
- (Capable of 100 to 240 V operation.)

Power consumption:

- 30 W

Dimensions:

- 346 (W) × 340 (H) × 330 (D) mm
- (13 5/8 × 13 1/2 × 13 inches)
- (Excluding all protruding parts.)

Mass:

- 11 kg (24 lb 4 oz)

#### VIDEO

Line A/B:

- Loop-through BNC
- 1.0 Vp-p, sync negative, Automatic 75  $\Omega$  termination\*

External sync:

- Loop-through BNC
- 1.0 to 4.0 Vp-p negative, Automatic 75  $\Omega$  termination\*

#### AUDIO

Line A/B:

- Loop-through Phono
- 5 dBu, high impedance

\* 75  $\Omega$  termination is automatically set to OFF when connection is made to the OUT connector.



## Monitors

# PVM-136 Black and White Video Monitor

### Features

●14-inch\* black and white video monitor ●EIA/CCIR automatic selection ●High resolution of 1000 TV lines ●Composite input ●Accepts external sync ●Color temperature D65 ●Built-in H/V delay, underscan, notch filter and tally functions ●Aspect ratio 4:3 and 16:9 switchable ●Built-in speaker ●Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket and slide rail kit

\* 13 inches viewable area, measured diagonally.

### Supplied Accessories

AC Power Cord (1)  
AC Plug Holders (1)  
Number Plate (1 set) (1)  
Remote Connector 8-pin (1)  
Operation Manual (1)

### Optional Accessories

MB-502B Mounting Bracket  
SLR-102 Slide Rail

### Specifications

#### General

##### System:

EIA 525 lines/60 fields, CCIR 625 lines/50 fields  
(automatically selected)

##### Power requirements:

120 V, 50/60 Hz

##### Power consumption:

Max. 30 W

##### Operating temperature:

0 to 35 °C (32 to 95 °F)

##### Dimensions:

346 (W) x 340 (H) x 330 (D) mm  
(13 5/8 x 13 1/2 x 13 inches)

##### Mass:

11 kg (24 lb 4 oz)

##### Picture tube:

34.0 cm (14 inches), 32.1 cm (13 inches)  
viewable area measured diagonally, 90° deflection

##### Color temperature:

D65

##### Resolution:

1000 TV lines

##### Frequency response:

-3 dB at 10 MHz

##### Normal scan:

8% overscan

##### Underscan:

3% underscan

##### Linearity:

Horizontal: less than 8%  
Vertical: less than 7%

#### Inputs/outputs

##### Video:

Loop-through BNC, 1.0 Vp-p, sync negative, 75  $\Omega$  termination

##### Audio:

Loop-through phono, -5 dB, high impedance, monaural

##### External sync:

Loop-through BNC, 1.0 to 4.0 Vp-p negative, 75  $\Omega$  termination

##### Audio power output:

0.5 W



## Monitors

# PVM-135 Black and White Video Monitor

### Features

- 14-inch\* black and white video monitor ●EIA/CCIR automatic selection ●A high resolution of 1000 TV lines
- Composite input ●Accepts external sync ●Built-in speaker ●Rack mountable into a 19-inch EIA standard rack with the optional rack mounting bracket and slide rail kit

\* 13 inches viewable area, measured diagonally.

### Supplied Accessories

- AC Power Cord (1)
- AC Plug Holders (1)
- Operation Manual (1)

### Optional Accessories

- MB-502B Mounting Bracket
- SLR-102 Slide Rail

### Specifications

#### General

##### System:

- EIA 525 lines/60 fields, CCIR 625 lines/50 fields
- (automatically selected)

##### Power requirements:

- 120 V, 50/60 Hz

##### Power consumption:

- Max. 30 W

##### Operating temperature:

- 0 to 35 °C (32 to 95 °F)

##### Dimensions:

- 346 (W) x 340 (H) x 330 (D) mm
- (13 5/8 x 13 1/2 x 13 inches)

##### Mass:

- 11 kg (24 lb 4 oz)

##### Picture tube:

- 34.0 cm (14 inches), 32.1 cm (13 inches)
- viewable area measured diagonally, 90° deflection

##### Resolution:

- 1000 TV lines

##### Frequency response:

- 3 dB at 10 MHz

##### Normal scan:

- 8% overscan

##### Underscan:

- 3% underscan

##### Linearity:

- Horizontal: less than 8%
- Vertical: less than 7%

### Inputs/outputs

#### Video:

- Loop-through BNC, 1.0 Vp-p, sync negative, 75  $\Omega$  termination

#### Audio:

- Loop-through phono, -5 dB, high impedance, monaural

#### External sync:

- Loop-through BNC, 1.0 to 4.0 Vp-p negative, 75  $\Omega$  termination

#### Audio power output:

- 0.5 W



## Monitors

# PVM-97 Black & White Monitor

### Features

●EIA/CCIR automatic selection ●A high resolution of 900 TV lines at center ●Underscan capability ●Built-in speaker for audio monitoring ●Accepts external sync ●Tally input ●Rack mountable with a second PVM-97 (or an optional Mounting Panel MB-509) by using the optional Mounting Bracket MB-520

\* Not available in some areas. For details, please contact your nearest Sony office.

### Supplied Accessories

AC Power Cord (1)  
AC Plug Holders (1)  
Operation Manual (1)

### Optional Accessories

MB-509 Mounting Panel  
MB-520 Mounting Bracket

### Specifications

#### General

##### Video signal system:

EIA 525 lines, 60 fields/CCIR 625 lines,  
50 fields

(switching of EIA to CCIR or vice versa  
is automatically done)

##### Picture tube:

23.0 cm (9-inch) CRT, 21.7 cm (9-inch)  
visible picture measured diagonally, 90°  
deflection

##### Horizontal resolution:

900 TV lines at center

##### Audio power output:

Monaural, 0.5 W with built-in speaker

##### Power requirements:

AC 120 V, 50/60 Hz

(Capable of 100 to 240 V operation.)

##### Power consumption:

28 W

##### Dimensions:

217 (W) × 218 (H) × 250 (D) mm

(8 5/8 × 8 5/8 × 9 7/8 inches)

(Excluding all protruding parts.)

##### Mass:

5.5 kg (12 lb 2 oz)

#### VIDEO

##### Line A/B:

Loop-through BNC

1.0 Vp-p, sync negative, Automatic 75

Ω termination\*

##### External sync:

Loop-through BNC

1.0 to 4.0 Vp-p negative, Automatic 75

Ω termination\*

#### AUDIO

##### Line A/B:

Loop-through Phono

-5 dBu, high impedance



## Monitors

# PVM-96 Black and White Video Monitor

### Features

•9-inch\* black and white video monitor •EIA/CCIR automatic selection •High resolution of 900 TV lines  
 •Composite input •Accepts external sync •Color temperature D65 •Built-in H/V delay, underscan, notch filter and tally functions •Aspect ratio 4:3 and 16:9 switchable •Built-in speaker •Mountable into a 19-inch EIA standard rack with a second PVM-96 (or the optional mounting panel) and the optional rack mounting bracket

\* 8 5/8 inches viewable area, measured diagonally.

### Supplied Accessories

AC Power Cord (1)  
 AC Plug Holders (1)  
 Remote Connector 8-pin (1)  
 Operation Manual (1)

### Optional Accessories

MB-509 Mounting Panel  
 MB-520 Mounting Bracket

### Specifications

#### General

##### System:

EIA 525 lines/60 fields, CCIR 625 lines/50 fields  
 (automatically selected)

##### Power requirements:

120 V, 50/60 Hz

##### Power consumption:

Max. 28 W

##### Operating temperature:

0 to 35 °C (32 to 95 °F)

##### Dimensions:

217 (W) x 218 (H) x 250 (D) mm  
 (8 5/8 x 8 5/8 x 9 7/8 inches)

##### Mass:

5.5 kg (12 lb 2 oz)

##### Picture tube:

23.0 cm (9 inches), 21.7 cm (8 5/8 inches)  
 viewable area measured diagonally, 90° deflection

##### Color temperature:

D65

##### Resolution:

900 TV lines

##### Frequency response:

-3 dB at 10 MHz

##### Normal scan:

8% overscan

##### Underscan:

3% underscan

##### Linearity:

Horizontal: less than 8%  
 Vertical: less than 7%

### Inputs/outputs

#### Video:

Loop-through BNC, 1.0 Vp-p, sync negative, 75  $\Omega$  termination

#### Audio:

Loop-through phono, -5 dB, high impedance, monaural

#### External sync:

Loop-through BNC, 1.0 to 4.0 Vp-p negative, 75  $\Omega$  termination

#### Audio power output:

0.5 W



## Monitors

# PVM-96E Black and White Video Monitor

### Features

●9-inch\* black and white video monitor ●CCIR/EIA automatic selection ●High resolution of 900 TV lines ●Composite input ●Accepts external sync ●Color temperature D65 ●Built-in H/V delay, underscan, notch filter and tally functions ●Aspect ratio 4:3 and 16:9 switchable ●Built-in speaker ●Mountable into a 19-inch EIA standard rack with a second PVM-96E (or the optional mounting panel) and the optional rack mounting bracket

\* 8 5/8 inches viewable area, measured diagonally.

### Supplied Accessories

AC Power Cord (1)  
AC Plug Holders (1)  
Remote Connector 8-pin (1)  
Operation Manual (1)

### Optional Accessories

MB-509 Mounting Panel  
MB-520 Mounting Bracket

### Specifications

#### General

##### System:

CCIR 625 lines/50 fields, EIA 525 lines/60 fields  
(automatically selected)

##### Power requirements:

120 V, 50/60 Hz

##### Power consumption:

Max. 28 W

##### Operating temperature:

0 to 35 °C (32 to 95 °F)

##### Dimensions:

217 (W) x 218 (H) x 250 (D) mm  
(8 5/8 x 8 5/8 x 9 7/8 inches)

##### Mass:

5.5 kg (12 lb 2 oz)

##### Picture tube:

23.0 cm (9 inches), 21.7 cm (8 5/8 inches)  
viewable area measured diagonally, 90° deflection

##### Color temperature:

D65

##### Resolution:

900 TV lines

##### Frequency response:

-3 dB at 10 MHz

##### Normal scan:

8% overscan

##### Underscan:

3% underscan

##### Linearity:

Horizontal: less than 8%  
Vertical: less than 7%

### Inputs/outputs

#### Video:

Loop-through BNC, 1.0 Vp-p, sync negative, 75  $\Omega$  termination

#### Audio:

Loop-through phono, -5 dB, high impedance, monaural

#### External sync:

Loop-through BNC, 1.0 to 4.0 Vp-p negative, 75  $\Omega$  termination

#### Audio power output:

0.5 W



## Monitors

# PVM-95 Black and White Video Monitor

### Features

- 9-inch\* black and white video monitor
- EIA/CCIR automatic selection
- A high resolution of 900 TV lines
- Composite input
- Accepts external sync
- Built-in speaker
- Mountable into a 19-inch EIA standard rack with a second PVM-95 (or the optional mounting panel) and the optional rack mounting bracket

\* 8 5/8 inches viewable area, measured diagonally.

### Supplied Accessories

- AC Power Cord (1)
- AC Plug Holders (1)
- Operation Manual (1)

### Optional Accessories

- MB-520 Mounting Bracket
- MB-509 Mounting Panel

### Specifications

#### General

##### System:

- EIA 525 lines/60 fields, CCIR 625 lines/50 fields
- (automatically selected)

##### Power requirements:

- 120 V, 50/60 Hz

##### Power consumption:

- Max. 28 W

##### Operating temperature:

- 0 to 35 °C (32 to 95 °F)

##### Dimensions:

- 217 (W) x 218 (H) x 250 (D) mm
- (8 5/8 x 8 5/8 x 9 7/8 inches)

##### Mass:

- 5.5 kg (12 lb 2 oz)

##### Picture tube:

- 23.0 cm (9 inches), 21.7 cm (8 5/8 inches)
- viewable area measured diagonally, 90° deflection

##### Resolution:

- 900 TV lines

##### Frequency response:

- 3 dB at 10 MHz

##### Normal scan:

- 8% overscan

##### Underscan:

- 3% underscan

##### Linearity:

- Horizontal: less than 8%
- Vertical: less than 7%

### Inputs/outputs

#### Video:

- Loop-through BNC, 1.0 Vp-p, sync negative, 75  $\Omega$  termination

#### Audio:

- Loop-through phono, -5 dB, high impedance, monaural

#### External sync:

- Loop-through BNC, 1.0 to 4.0 Vp-p negative, 75  $\Omega$  termination

#### Audio power output:

- 0.5 W



## Monitors

# PVM-95E Black and White Video Monitor

### Features

- 9-inch\* black and white video monitor
- CCIR/EIA automatic selection
- A high resolution of 900 TV lines
- Composite input
- Accepts external sync
- Built-in speaker
- Mountable into a 19-inch EIA standard rack with a second PVM-95E (or the optional mounting panel) and the optional rack mounting bracket

\* 8 5/8 inches viewable area, measured diagonally.

### Supplied Accessories

- AC Power Cord (1)
- AC Plug Holders (1)
- Operation Manual (1)

### Optional Accessories

- MB-520 Mounting Bracket
- MB-509 Mounting Panel

### Specifications

#### General

##### System:

CCIR 625 lines/50 fields, EIA 525 lines/60 fields  
(automatically selected)

##### Power requirements:

120 V, 50/60 Hz

##### Power consumption:

Max. 28 W

##### Operating temperature:

0 to 35 °C (32 to 95 °F)

##### Dimensions:

217 (W) x 218 (H) x 250 (D) mm  
(8 5/8 x 8 5/8 x 9 7/8 inches)

##### Mass:

5.5 kg (12 lb 2 oz)

##### Picture tube:

23.0 cm (9 inches), 21.7 cm (8 5/8 inches)  
viewable area measured diagonally, 90° deflection

##### Resolution:

900 TV lines

##### Frequency response:

-3 dB at 10 MHz

##### Normal scan:

8% overscan

##### Underscan:

3% underscan

##### Linearity:

Horizontal: less than 8%  
Vertical: less than 7%

### Inputs/outputs

#### Video:

Loop-through BNC, 1.0 Vp-p, sync negative, 75  $\Omega$  termination

#### Audio:

Loop-through phono, -5 dB, high impedance, monaural

#### External sync:

Loop-through BNC, 1.0 to 4.0 Vp-p negative, 75  $\Omega$  termination

#### Audio power output:

0.5 W



## Monitor Accessories

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BKM-127W .....	663	MB-507 .....	682
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BKM-12Y.....	666	MB-510 .....	683
BKM-140M .....	666	MB-512 .....	684
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BKM-14L.....	668	MB-520 .....	684
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BKM-200M .....	670	MB-523 .....	685
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BKM-21D.....	671	MB-525 .....	686
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BKM-229X.....	672	MB-528 .....	687
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BKM-243HS .....	673	SLR-103A .....	687
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BKM-255DV .....	674	SLR-104 .....	688
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## Monitor Accessories

### BKM-101C Component Serial Digital Interface Kit

#### Features

- Component serial digital interface kit for video

#### Specifications

##### Mass

820 g (1 lb 13 oz)



### BKM-102 Component Serial Digital Interface Kit

#### Features

- Component serial digital interface kit for audio

#### Specifications

##### Mass

130 g (4.6 oz)



### BKM-103 Serial Remote Interface Kit

#### Features

- RS-422 serial remote interface kit

#### Specifications

##### Mass-

157 g (5.5 oz)



## Monitor Accessories

### BKM-10R Monitor Control Unit

#### Features

- Central control unit ●Up to 32 displays can be controlled

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D14H1A Color Video Monitor  
 BVM-D14H1E Color Video Monitor  
 BVM-D14H1U Color Video Monitor  
 BVM-D14H5A Color Video Monitor  
 BVM-D14H5E Color Video Monitor  
 BVM-D14H5U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor  
 BVM-D9H1A Color Video Monitor  
 BVM-D9H1E Color Video Monitor  
 BVM-D9H1U Color Video Monitor  
 BVM-F24A CineAlta Color Video Monitor  
 BVM-F24U CineAlta Color Video Monitor



### BKM-11R Monitor Control Unit

#### Features

- Hand-held control unit ●Up to 32 displays can be controlled

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-14F5E Color Video Monitor  
 BVM-14F5U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D14H1A Color Video Monitor  
 BVM-D14H1E Color Video Monitor  
 BVM-D14H1U Color Video Monitor  
 BVM-D14H5A Color Video Monitor  
 BVM-D14H5E Color Video Monitor  
 BVM-D14H5U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor  
 BVM-D9H1A Color Video Monitor  
 BVM-D9H1E Color Video Monitor  
 BVM-D9H1U Color Video Monitor  
 BVM-D9H5A Color Video Monitor  
 BVM-D9H5E Color Video Monitor  
 BVM-D9H5U Color Video Monitor  
 BVM-F24A CineAlta Color Video Monitor  
 BVM-F24U CineAlta Color Video Monitor



## Monitor Accessories

# BKM-120D SD-SDI 4:2:2 Input Adaptor

### Features

#### ●SD-SDI input/output

#### Applicable Models

BVM-D14H1A Color Video Monitor  
 BVM-D14H1E Color Video Monitor  
 BVM-D14H1U Color Video Monitor  
 BVM-D14H5A Color Video Monitor  
 BVM-D14H5E Color Video Monitor  
 BVM-D14H5U Color Video Monitor  
 BVM-D9H1A Color Video Monitor  
 BVM-D9H1E Color Video Monitor  
 BVM-D9H1U Color Video Monitor  
 BVM-D9H5A Color Video Monitor  
 BVM-D9H5E Color Video Monitor  
 BVM-D9H5U Color Video Monitor  
 PVM-14L2 Color Video Monitor  
 PVM-14L3 Color Video Monitor  
 PVM-14L4 Color Video Monitor  
 PVM-14L5 Color Video Monitor  
 PVM-20L2 Color Video Monitor  
 PVM-20L4 Color Video Monitor  
 PVM-20L5 Color Video Monitor  
 PVM-9L2 Color Video Monitor  
 PVM-9L3 Color Video Monitor  
 PVM-D14L5A Color Video Monitor  
 PVM-D20L5A Color Video Monitor

#### Specifications

##### Inputs/outputs

SD-SDI:

BNC (x2)

Active Loop-through

##### Dimensions

24.7 (W) x 161.4 (H) x 121.8 (D) mm

(1x 6 3/8 x 4 7/8 inches)

##### Mass

310 g (11 oz)



## Monitor Accessories

### BKM-126M PAL-M input adaptor

#### Features

- 2 Analog Composite PAL-M inputs\*2 outputs with loop-through\*Automatic 75-ohm terminated

#### Applicable Models

PVM-14L2 Color Video Monitor  
PVM-20L2 Color Video Monitor  
PVM-9L2 Color Video Monitor  
PVM-9L3 Color Video Monitor

#### Specifications

##### Inputs/outputs

Analog Composite PAL-M inputs (x 2)  
Analog Composite PAL-M outputs with loop-through(x 2)  
Automatic 75-ohm terminated

##### Dimensions

25 (W) x 162 (H) x 122 (D) mm  
(1 x 6 1/2 x 4 7/8 inches)

##### Mass

270.0g (10 oz)

Power consumption:

3.0W

Applicable models

PVM-20L5, PVM-14L5  
PVM-20L2, PVM-14L2, PVM-9L2



### BKM-127W NTSC/PAL Input Adaptor

#### Features

- Composite video input/output and Y/C input/output
- Digital 3-lines Comb filter

#### Applicable Models

BVM-D14H1A Color Video Monitor  
BVM-D14H1E Color Video Monitor  
BVM-D14H1U Color Video Monitor  
BVM-D14H5A Color Video Monitor  
BVM-D14H5E Color Video Monitor  
BVM-D14H5U Color Video Monitor  
BVM-D9H1A Color Video Monitor  
BVM-D9H1E Color Video Monitor  
BVM-D9H1U Color Video Monitor  
BVM-D9H5A Color Video Monitor  
BVM-D9H5E Color Video Monitor  
BVM-D9H5U Color Video Monitor

#### Specifications

##### Inputs/outputs

Composite:

Loop-through BNC (x 2)

Y/C:

Loop-through Mini DIN 4-pin

##### Dimensions

24.7 (W) x 161.4 (H) x 121.8 (D) mm  
(1 x 6 3/8 x 4 7/8 inches)

##### Mass

Approx. 270 g (10 oz)



## Monitor Accessories

# BKM-128WX Analog input adapter

### Features

- Analog composite/YC input and output signal connectors\*Analog RGB/Component and external sync input and output signal connectors\*Aperture enhance function for Analog composite and Y/C inputs\*Trap filter incorporated for Analog RGB/Component input\*Automatic 75-ohm termination

### Specifications

#### Inputs/outputs

Analog composite signals

BNC x 1, high impedance, with loop-through output and 75 $\Omega$  automatic termination

Y/C

4-pin mini DIN x 1, with loop-through output and 75 $\Omega$  automatic termination

Analog Composite

1 Vp-p+3dB/-6dB, 50Hz to 6MHz +/- 2dB

Y

1 Vp-p+/-6dB, 50Hz to 6MHz +/- 2dB

C

0.286 Vp-p+/-6dB(NTSC), 0.3 Vp-p+/-6dB(PAL)

Analog component(Y/PB/PR, RGB)

BNC x 3, high impedance, with loop-through output and 75 $\Omega$  automatic termination

Y

1 Vp-p+/-6dB, 48Hz to 30MHz +/- 3dB

PB(B-Y)PR(R-Y)

0.7 Vp-p, 75ohm, positive/48Hz to 30MHz +/- 3dB

R/G/B

0.7 Vp-p, 75ohm, positive/48Hz to 30MHz +/- 3dB

external sync

BNC x 1, with loop-through output and 75 $\Omega$  automatic termination

#### Dimensions

50 (W) x 162 (H) x 122 (D) mm

(2 x 6 1/2 x 4 7/8 inches)

#### Mass

470g (1.6 oz)

Power consumption:

3.0W

Applicable models

LMD-151MD,LMD-181MD



## Monitor Accessories

# BKM-129X Analog Component Input Adaptor

### Features

- Component input/output and external sync input/output

### Applicable Models

BVM-D14H1A Color Video Monitor  
BVM-D14H1E Color Video Monitor  
BVM-D14H1U Color Video Monitor  
BVM-D14H5A Color Video Monitor  
BVM-D14H5E Color Video Monitor  
BVM-D14H5U Color Video Monitor  
BVM-D9H1A Color Video Monitor  
BVM-D9H1E Color Video Monitor  
BVM-D9H1U Color Video Monitor  
BVM-D9H5A Color Video Monitor  
BVM-D9H5E Color Video Monitor  
BVM-D9H5U Color Video Monitor  
PVM-14L2 Color Video Monitor  
PVM-14L3 Color Video Monitor  
PVM-14L4 Color Video Monitor  
PVM-14L5 Color Video Monitor  
PVM-20L2 Color Video Monitor  
PVM-20L4 Color Video Monitor  
PVM-20L5 Color Video Monitor  
PVM-9L2 Color Video Monitor  
PVM-9L3 Color Video Monitor  
PVM-D14L5A Color Video Monitor  
PVM-D20L5A Color Video Monitor

### Specifications

#### Inputs/outputs

RGB/Component:

Loop-through BNC

External sync:

Loop-through BNC

#### Dimensions

24.7 (W) x 161.4 (H) x 121.8 (D) mm  
(1 x 6 3/8 x 4 7/8 inches)

#### Mass

Approx. 250 g (9 oz)



## Monitor Accessories

### BKM-12Y Memory Card

#### Features

- PCMCIA card ●Monitor setups can be saved/downloaded

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-14F5E Color Video Monitor  
 BVM-14F5U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor  
 BVM-F24A CineAlta Color Video Monitor  
 BVM-F24U CineAlta Color Video Monitor



### BKM-140M 16:9 Mask

#### Features

- 16:9 mask for 14-inch monitors

#### Applicable Models

PVM-14L3 Color Video Monitor  
 PVM-14L4 Color Video Monitor  
 PVM-14L5 Color Video Monitor  
 PVM-D14L5A Color Video Monitor

#### Specifications

##### Dimensions

291 (W) x 228 (H) mm  
 (11 1/2 x 9 inches)

##### Mass

96 g (3 oz)



## Monitor Accessories

# BKM-142HD HD SDI Input Adaptor

### Features

●HD SDI signal input and monitor out ●Acceptable HD SDI signals: 1080/24PsF, 1080/50I, 1035/60I, 1080/60I, 720/60P

### Applicable Models

BVM-D14H1A Color Video Monitor  
BVM-D14H1E Color Video Monitor  
BVM-D14H1U Color Video Monitor  
BVM-D14H5A Color Video Monitor  
BVM-D14H5E Color Video Monitor  
BVM-D14H5U Color Video Monitor  
BVM-D9H1A Color Video Monitor  
BVM-D9H1E Color Video Monitor  
BVM-D9H1U Color Video Monitor  
BVM-D9H5A Color Video Monitor  
BVM-D9H5E Color Video Monitor  
BVM-D9H5U Color Video Monitor  
PVM-14L5 Color Video Monitor  
PVM-20L5 Color Video Monitor  
PVM-D14L5A Color Video Monitor  
PVM-D20L5A Color Video Monitor

### Specifications

#### Inputs/outputs

HD SDI:

HD SDI terminal (x 2)

MONITOR OUT:

x 1

#### Dimensions\*

49.7 (W) x 161.4 (H) x 121.8 (D) mm

(2 x 6 3/8 x 4 7/8 inches)

#### Mass

Approx. 730 g (1lb 10 oz)



\* The BKM-142HD occupies 2 slots.

## Monitor Accessories

### BKM-14L Auto Setup Probe

#### Features

- External probe for color temperature auto alignment
- Auto white balance ●Color temperature analysis



#### Applicable Models

BVM-14F1E Color Video Monitor  
BVM-14F1U Color Video Monitor  
BVM-14F5E Color Video Monitor  
BVM-14F5U Color Video Monitor  
BVM-20F1E Color Video Monitor  
BVM-20F1U Color Video Monitor  
BVM-D14H1A Color Video Monitor  
BVM-D14H1E Color Video Monitor  
BVM-D14H1U Color Video Monitor  
BVM-D14H5A Color Video Monitor  
BVM-D14H5E Color Video Monitor  
BVM-D14H5U Color Video Monitor

BVM-D20F1A Color Video Monitor  
BVM-D20F1E Color Video Monitor  
BVM-D20F1U Color Video Monitor  
BVM-D24E1WA Color Video Monitor  
BVM-D24E1WE Color Video Monitor  
BVM-D24E1WU Color Video Monitor  
BVM-D32E1WE Color Video Monitor  
BVM-D32E1WU Color Video Monitor  
BVM-D9H1A Color Video Monitor  
BVM-D9H1E Color Video Monitor  
BVM-D9H1U Color Video Monitor  
BVM-D9H5A Color Video Monitor  
BVM-D9H5E Color Video Monitor

BVM-D9H5U Color Video Monitor  
BVM-F24A CineAlta Color Video Monitor  
BVM-F24U CineAlta Color Video Monitor  
PVM-14L3 Color Video Monitor  
PVM-14L4 Color Video Monitor  
PVM-20L4 Color Video Monitor

#### Specifications

##### Mass

135 g (4 oz)

### BKM-150CP SDTI-CP/SD-SDI Input Adaptor

#### Features

- SDTI-CP/SD-SDI input/output and audio output

#### Applicable Models

PVM-14L2 Color Video Monitor  
PVM-14L3 Color Video Monitor  
PVM-14L4 Color Video Monitor  
PVM-14L5 Color Video Monitor  
PVM-20L2 Color Video Monitor  
PVM-20L4 Color Video Monitor  
PVM-20L5 Color Video Monitor  
PVM-9L2 Color Video Monitor  
PVM-9L3 Color Video Monitor  
PVM-D14L5A Color Video Monitor  
PVM-D20L5A Color Video Monitor

#### Specifications

##### Inputs/outputs

SDTI-CP/SD-SDI:

BNC (x2)

Active Loop-through

Audio output:

Pin jack (x 2)

##### Dimensions

50 (W) x 162 (H) x 122 (D) mm

(2 x 6 1/2 x 4 7/8 inches)

##### Mass

580 kg (1 lb 4 oz)



## Monitor Accessories

# BKM-155DV DV Input Adaptor

Video signal Input Adaptor for PVM-L2 series, PVM-9L3, PVM-D20L/D14L series, PVM-20L/14L/9L series and LMD-181MD/151MD

### Features

●DV input/output (x2) (6-pin). ●Analog audio output (x2).

### Applicable Models

PVM-9L3 Color Video Monitor

### Supplied Accessories

Installation manual (1)

### Specifications

#### General

Power requirement:

+5 V,  $\pm 6$  V (supplied from the monitor)

Power consumption:

10 W

Operating Conditions:

Temperature

0°C to 35°C (32°F to 95°F)

Optimum temperature

20°C to 30°C (68°F to 86°F)

Humidity

0% to 90% (no condensation)

Pressure

700 hPa to 1060 hPa

Dimensions:

50 (W) x 162 (H) x 122 (D) mm

(2 x 6 1/2 x 4 7/8 inches)

Mass:

Approx. 460 g (1 lb)

#### Input/Output Connectors

DV:

6-pin x 2

#### Output connectors

Audio:

Phono jack x 2, analog audio -5dBu, 47

k $\Omega$  load

#### Signal characteristics

Video Signals:

Sampling frequency:

Y: 13.5 MHz

R-Y/B-Y: 6.75 MHz

Quantization:

8 bits

Frequency response:

Y: 5 Hz to 5.75 MHz  $\pm 3$  dB

R-Y/B-Y: 100 Hz to 1 MHz  $\pm 3$  dB

Chrominance/luminance signals:

Delay time error: 30 nsec max.

Gain error: 5 % max.

K factor:

1 % max. (2T pulse)

Audio Signals:

Channel number:

4 ch

Sampling frequency:

2 ch: 48 kHz

4 ch: 32 kHz

Quantization:

2 ch: 16 bits

4 ch: 12 bits



## Monitor Accessories

### BKM-200M 16:9 Mask

#### Features

- 16:9 mask for 20-inch monitors

#### Applicable Models

PVM-20L4 Color Video Monitor

PVM-20L5 Color Video Monitor

PVM-D20L5A Color Video Monitor

#### Specifications

##### Dimensions

403 (W) x 326 (H) mm

(15 7/8 x 12 7/8 inches)

##### Mass

175 g (6 oz)



### BKM-20D SDI 4:2:2 Decoder Adaptor

#### Features

- SDI (4:2:2 only) input/output and component input/output

#### Applicable Models

BVM-14F1E Color Video Monitor

BVM-14F1U Color Video Monitor

BVM-14F5E Color Video Monitor

BVM-14F5U Color Video Monitor

BVM-20F1E Color Video Monitor

BVM-20F1U Color Video Monitor

BVM-D20F1A Color Video Monitor

BVM-D20F1E Color Video Monitor

BVM-D20F1U Color Video Monitor

BVM-D24E1WA Color Video Monitor

BVM-D24E1WE Color Video Monitor

BVM-D24E1WU Color Video Monitor

BVM-D32E1WE Color Video Monitor

BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

SDI:

Active loop-through BNC (x 3)

Component:

Loop-through BNC

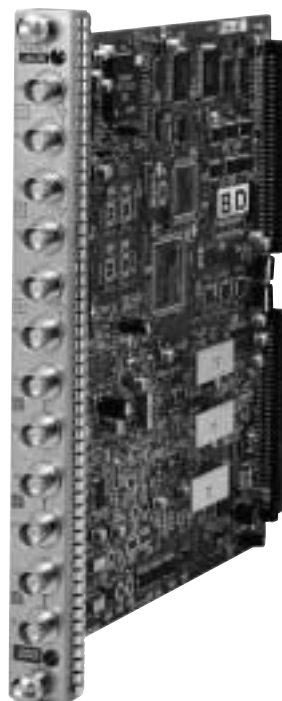
##### Dimensions

25 (W) x 256 (H) x 245 (D) mm

(31/32 x 10 1/8 x 9 3/4 inches)

##### Mass

768 g (1 lb 11 oz)



## Monitor Accessories

### BKM-21D SDI Multi Decoder Adaptor

#### Features

- SDI (4:2:2 or 4fsc NTSC/PAL) input/output and composite (NTSC/PAL) input/output

#### Applicable Models

BVM-14F1E Color Video Monitor  
BVM-14F1U Color Video Monitor  
BVM-14F5E Color Video Monitor  
BVM-14F5U Color Video Monitor  
BVM-20F1E Color Video Monitor  
BVM-20F1U Color Video Monitor  
BVM-D20F1A Color Video Monitor  
BVM-D20F1E Color Video Monitor  
BVM-D20F1U Color Video Monitor  
BVM-D24E1WA Color Video Monitor  
BVM-D24E1WE Color Video Monitor  
BVM-D24E1WU Color Video Monitor  
BVM-D32E1WE Color Video Monitor  
BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

SDI:

Active loop-through BNC (x 3)

Composite:

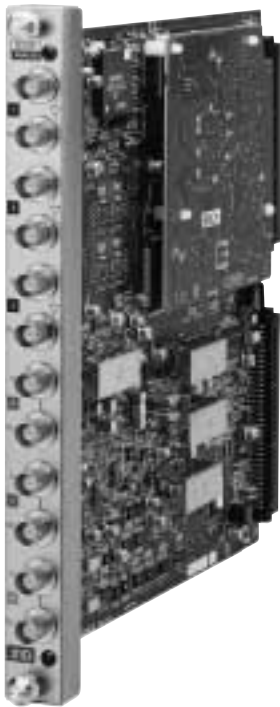
Loop-through BNC (x 3)

##### Dimensions

25 (W) x 256 (H) x 245 (D) mm  
(31/32 x 10 1/8 x 9 3/4 inches)

##### Mass

770 g (1 lb 11oz)



### BKM-220D SDI 4:2:2 Input Adaptor

SDI 4:2:2 Input Adaptor main unit providing video input and output connectors for the main unit and a decoder for serial digital component signals.

#### Features

- Decoder for serial digital component signals ●Serial digital input and output signal connector



#### Applicable Models

MEU-WX2 Multiformat Engine Unit

#### Supplied Accessories

Operating Instructions (1)

#### Specifications

##### General

Mass:

Approx. 250 g (9 oz)

Voltage:

+5 V (supplied from the main unit)

Power consumption:

Approx. 1.5 W

##### Operating conditions

Temperature:

0°C to 35°C (32°F to 95°F)

Optimum temperature:

20°C to 30°C (68°F to 86°F)

Humidity:

0% to 90% (no condensation)

Pressure:

700hPa to 1060 hPa

##### Storage and transport conditions

Temperature:

-10°C to 40°C (14°F to 104°F)

Humidity:

0% to 90%

Pressure:

700 hPa to 1060 hPa

Maximum external dimensions (w/h/d):

100 x 20 x 162 mm (4 x 13/16 x 6 1/2 inches)

##### Input/output connectors

Digital input:

BNC x 2, with monitor output connector

##### Signal characteristics

Digital component signals:

Sampling frequency: Y/R-Y/B-Y: 13.5 MHz

Quantization: 10bits/sample

MONITOR OUT:

Output signal amplitude: 800 mVp-p ± 10%

Output impedance: 75-ohms unbalanced

Transmission distance:

200 m (approx. 656 ft) max. (When using 5C-2V coaxial cables (Fujikura, Inc.) or equivalent.)

## Monitor Accessories

# BKM-227W SONY ANALOG COMPONENT INPUT ADAPTOR

### Features

- Input adaptor for NTSC/PAL signals ●Composite (BNCx 1) input/output ●Y/C (4-pin mini DIN x 1) input/output



### Supplied Accessories

Operating instructions (1)

### Specifications

#### -General-

#### Mass

Approx. 240 g (8 oz)

#### Voltage

3.3 V, +5 V (supplied from the main unit)

#### Power consumption

Approx. 1.8 W

#### -Operating conditions-

#### Temperature

0°C to 35°C (32°F to 95°F)

#### Optimum temperature

20°C to 30°C (68°F to 86°F)

#### Humidity

0% to 90% (no condensation)

#### Pressure

700hPa to 1060 hPa

#### -Storage and transport conditions-

#### Temperature

-10°C to 40°C (14°F to 104°F)

#### Humidity

0% to 90%

#### Pressure

700 hPa to 1060 hPa

#### Maximum external dimensions (w/h/d)

100 × 20 × 162 mm (4 × 13/16 × 6 1/2 inches)

#### -Input/output connectors-

#### Video input connector

Composite

BNC × 1

1 Vp-p ± 3 dB sync negative

#### Y/C

4-pin mini DIN x 1

Y: 1 Vp-p ± 3 dB sync negative

C: 0.286 Vp-p ± 3 dB (NTSC burst signal level)

0.3 Vp-p ± 3 dB (PAL burst signal level)

#### Video output connector

BNC x 1

Loop-through, 75 Ω automatic termination

4-pin mini DIN x 1

Loop-through, 75 Ω automatic termination

#### -Signal characteristics-

#### Video signal (NTSC/PAL)

Sampling frequency

Y/R-Y/B-Y: 13.5 MHz

Quantization

10 bits/sample

# BKM-229X Analog Component Input Adaptor

### Features

- Input adaptor for analog component signals ●BNC (x 3) input/output connectors ●Accepts RGB and Component video signals including 575/50i, 480/60i, 576/50p, 480/60p, 1080/50i, 1035/60i, 1080/60i, 720/60p



### Supplied Accessories

Operating Instruction (1)

### Specifications

#### -General-

#### Mass

Approx. 250 g (9 oz)

#### Voltage

3.3 V, +5 V (supplied from the main unit)

#### Power consumption

Approx. 4.0 W

#### -Operating conditions-

#### Temperature

0°C to 35°C (32°F to 95°F)

#### Optimum temperature

20°C to 30°C (68°F to 86°F)

#### Humidity

0% to 90% (no condensation)

#### Pressure

700hPa to 1060 hPa

#### -Storage and transport conditions-

#### Temperature

-10°C to 40°C (14°F to 104°F)

#### Humidity

0% to 90%

#### Pressure

700 hPa to 1060 hPa

#### Maximum external dimensions (w/h/d)

100 × 20 × 162 mm (4 × 13/16 × 6 1/2 inches)

#### -Input/output connectors-

#### Video input connector

BNC × 3

RGB

0.7 Vp-p ± 3 dB (Sync on Green, 0.3

Vp-p sync negative)

Component

0.7 Vp-p ± 3 dB

#### External synchronized input

BNC x 1

0.3 to 4 Vp-p ± bipolarity ternary or negative polarity binary

#### -Signal characteristics-

#### Video signal (Y/R-Y/B-Y)

Quantization: 10 bits/sample

Y/R-Y/B-Y: 13.5 MHz

## Monitor Accessories

### BKM-22X SDI Multi Input Expansion Adaptor

#### Features

- SDI input/output and component input/output

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-14F5E Color Video Monitor  
 BVM-14F5U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

##### SDI:

Active loop-through BNC (x 3)

##### Component:

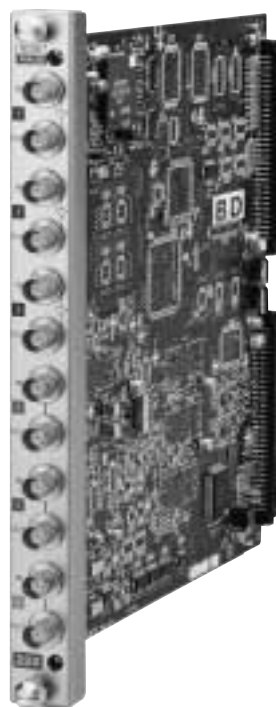
Loop-through BNC

##### Dimensions

25 (W) x 256 (H) x 245 (D) mm  
 (31/32 x 10 1/8 x 9 3/4 inches)

##### Mass

615 g (1 lb 5oz)



### BKM-243HS HD SDI&SDI Input Adaptor

HD SDI&SDI Input Adaptor providing video input and output connectors for the main unit and a decoder for HD/D1 serial digital component signals.

#### Features

- Decoder for serial digital component signals ●Serial digital input and output signal connector



#### Applicable Models

MEU-WX2 Multiformat Engine Unit

#### Supplied Accessories

Operating Instructions (1)

#### Specifications

##### General

Voltage +3.3 V, +5 V (supplied from the main unit)  
 Power consumption Approx. 2 W

##### Operating conditions

Temperature 0°C to 35°C (32°F to 95°F)  
 Optimum temperature 20°C to 30°C (68°F to 86°F)  
 Humidity 0% to 90% (no condensation)  
 Pressure 700hPa to 1060 hPa

##### Storage and transport conditions

Temperature -10°C to 40°C (14°F to 104°F)  
 Humidity 0% to 90%  
 Pressure 700 hPa to 1060 hPa  
 Maximum external dimensions (w/h/d) 100 × 20 × 162 mm (4 × 13/16 × 6 1/2 inches)  
 Mass Approx. 250 g (9 oz)

##### Input/output connectors

Digital input BNC × 2, with monitor output connector

##### Signal characteristics

Digital component signals  
 Sampling frequency D1-SDI: Y/R-Y/B-Y: 13.5 MHz  
 HD-SDI: Y/PB/PR: 74.25 MHz  
 Quantization 10bits/sample

##### MONITOR OUT

Output signal amplitude: 800 mVp-p ± 10%  
 Output impedance: 75-ohms unbalanced  
 Transmission distance D1-SDI: 200 m (approx. 656 ft) max. (When using 5C-2V coaxial cables (Fujikura. Inc.) or equivalent.)  
 HD-SDI: 100 m (approx. 328 ft) max. (When using 5C-FB coaxial cables (Fujikura. Inc.) or equivalent.)

## Monitor Accessories

### BKM-24N NTSC Decoder Adaptor

#### Features

- Composite (NTSC) input/output

#### Applicable Models

BVM-14F1E Color Video Monitor  
BVM-14F1U Color Video Monitor  
BVM-14F5E Color Video Monitor  
BVM-14F5U Color Video Monitor  
BVM-20F1E Color Video Monitor  
BVM-20F1U Color Video Monitor  
BVM-D20F1A Color Video Monitor  
BVM-D20F1E Color Video Monitor  
BVM-D20F1U Color Video Monitor  
BVM-D24E1WA Color Video Monitor  
BVM-D24E1WE Color Video Monitor  
BVM-D24E1WU Color Video Monitor  
BVM-D32E1WE Color Video Monitor  
BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

Composite:

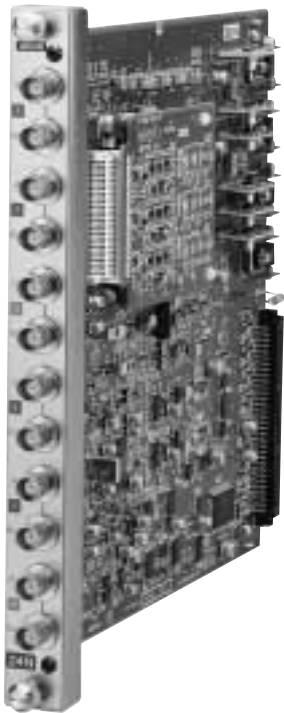
Loop-through BNC (x 6)

##### Dimensions

25 (W) x 256 (H) x 245 (D) mm  
(31/32 x 10 1/8 x 9 3/4 inches)

##### Mass

660 g (1 lb 7oz)



### BKM-255DV DV Input Adaptor

#### Features

- Decodes DV signals into Audio/Video signals ●Two pairs of 6-pin DV connectors ●400 Mbps communication

\*Power supply is not supported.



#### Applicable Models

MEU-WX2 Multiformat Engine Unit

#### Supplied Accessories

Operating Instructions (1)

#### Specifications

##### -General-

Power requirements

+5 V (supplied from the main unit)

Power consumption

4W

##### -Operating conditions-

Temperature

0°C to 35°C (32°F to 95°F)

Optimum temperature

20°C to 30°C (68°F to 86°F)

Humidity

0% to 90% (no condensation)

Pressure

700 hPa to 1060 hPa

##### -Storage and transport conditions-

Temperature

-10°C to 40°C (14°F to 104°F)

Humidity

0% to 90%

Pressure

700 hPa to 1060 hPa

Maximum external dimensions (w/h/d)

100 x 20 x 161 mm (4 x 13/16 x 6 3/8 inches)

Mass

Approx. 230 g (0.5 lb)

##### -Input/Output connectors-

DV

6-pin (IEEE1394) x 2

##### -Signal characteristics-

Video Signals

Sampling frequency

Y/R-Y/B-Y: 13.5 MHz

Quantization

8 bits/sample

Audio Signals

Channel number

4 ch

Sampling frequency

2ch: 48 kHz

4ch: 32 kHz

Quantization

2ch: 16 bits

4ch: 12 bits

## Monitor Accessories

### BKM-25P PAL Decoder Adaptor

#### Features

- Composite (PAL) input/output

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-14F5E Color Video Monitor  
 BVM-14F5U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

Composite:

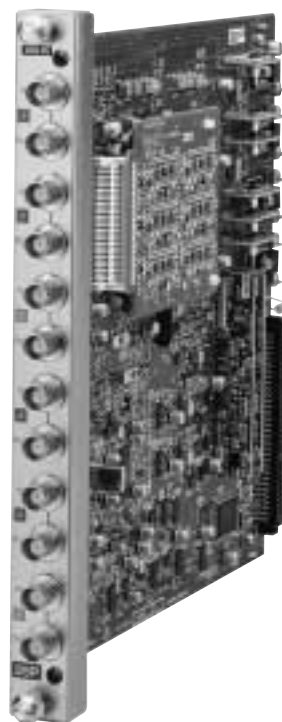
Loop-through BNC (x 6)

##### Dimensions

25 (W) x 256 (H) x 245 (D) mm  
 (31/32 x 10 1/8 x 9 3/4 inches)

##### Mass

680 g (1 lb 7oz)



### BKM-26M PAL-M Decoder Adaptor

#### Features

- Composite (PAL-M) input/output

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-14F5E Color Video Monitor  
 BVM-14F5U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

Composite:

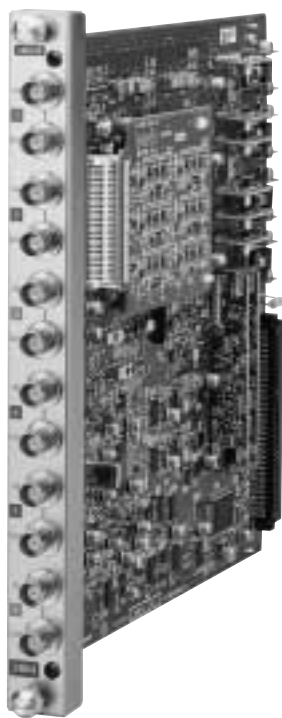
Loop-through BNC (x 6)

##### Dimensions

25 (W) x 256 (H) x 245 (D) mm  
 (31/32 x 10 1/8 x 9 3/4 inches)

##### Mass

680 g (1 lb 7oz)



## Monitor Accessories

### BKM-27T Tri-standard Decoder Adaptor

#### Features

- Composite (NTSC/PAL/SECAM) input/output

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-14F5E Color Video Monitor  
 BVM-14F5U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

Composite:

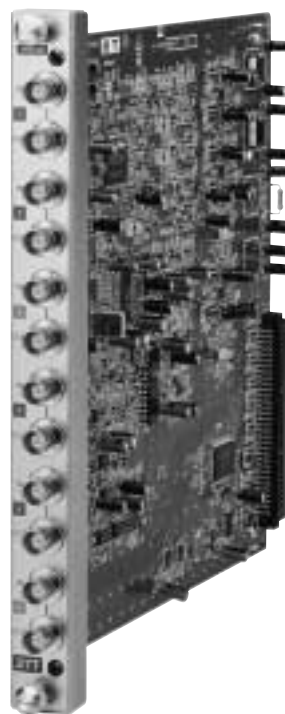
Loop-through BNC (x 6)

##### Dimensions

25 (W) x 256 (H) x 245 (D) mm  
 (31/32 x 10 1/8 x 9 3/4 inches)

##### Mass

580 g (1 lb 4 oz)



### BKM-28X Analog Input Expansion Adaptor

#### Features

- Composite input/output

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-14F5E Color Video Monitor  
 BVM-14F5U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

Composite:

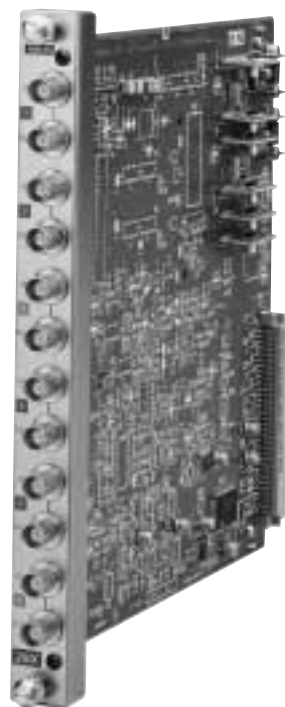
Loop-through BNC (x 6)

##### Dimensions

25 (W) x 256 (H) x 245 (D) mm  
 (31/32 x 10 1/8 x 9 3/4 inches)

##### Mass

550 g (1 lb 3oz)



## Monitor Accessories

### BKM-30E14 Rack Mount Kit

#### Features

- 19-inch EIA standard rack mount kit for 14-inch stand-alone monitors

#### Applicable Models

BVM-14F5E Color Video Monitor  
BVM-14F5U Color Video Monitor  
BVM-D14H5A Color Video Monitor  
BVM-D14H5E Color Video Monitor  
BVM-D14H5U Color Video Monitor



### BKM-30E20 Rack Mount Kit

#### Features

- 19-inch EIA standard rack mount kit for 20-inch monitors

#### Applicable Models

BVM-20F1E Color Video Monitor  
BVM-20F1U Color Video Monitor  
BVM-D20F1A Color Video Monitor  
BVM-D20F1E Color Video Monitor  
BVM-D20F1U Color Video Monitor



### BKM-31E14 Rack Mount Kit

#### Features

- 19-inch EIA standard rack mount kit for 14-inch monitors

#### Applicable Models

BVM-14F1E Color Video Monitor  
BVM-14F1U Color Video Monitor  
BVM-D14H1A Color Video Monitor  
BVM-D14H1E Color Video Monitor  
BVM-D14H1U Color Video Monitor



## Monitor Accessories

### BKM-320D SDI 4:2:2 Input adaptor

#### SDI 4:2:2 Input adaptor

##### Applicable Models

LMD-1410 LCD monitor  
LMD-1420 LCD monitor  
LMD-2010 LCD monitor  
LMD-2020 LCD monitor  
LMD-4420 Multiple LCD Monitor  
LMD-5320 Multiple LCD Monitor  
LMD-7220W Multiple LCD Monitor  
LMD-9050 LCD monitor

##### Specifications

##### Signal characteristics

Input signal format:

SMPTE259M 270Mbps, 10bit, 4:2:2  
component digital video

##### Input/output connectors

Input: BNC x 1

Output: D-sub9 pin

##### General

Power requirements: +5V(supplied from the monitor)

Power consumption: Approx.1.7W

Dimensions(W x H X D):

Approx.68 x 20 x 56 mm(2 3/4 x 1 3/16  
x 2 1/4 inches)

Mass: Approx.75g(3oz)



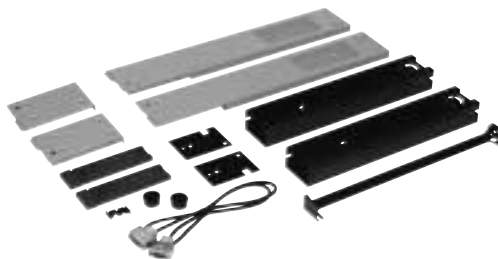
### BKM-32H Control Unit Attachment Kit

#### Features

- Attachment kit to attach BKM-10R to 20-inch monitors

##### Applicable Models

BVM-20F1E Color Video Monitor  
BVM-20F1U Color Video Monitor  
BVM-D20F1A Color Video Monitor  
BVM-D20F1E Color Video Monitor  
BVM-D20F1U Color Video Monitor



### BKM-33H14 16:9 Mask

#### Features

- 16:9 mask for 14-inch monitors

##### Applicable Models

BVM-14F1E Color Video Monitor  
BVM-14F1U Color Video Monitor  
BVM-14F5E Color Video Monitor  
BVM-14F5U Color Video Monitor



## Monitor Accessories

### BKM-33H20 16:9 Mask

#### Features

- 16:9 mask for 20-inch monitors

#### Applicable Models

BVM-20F1E Color Video Monitor  
BVM-20F1U Color Video Monitor



### BKM-34H Control Unit Attachment Kit

#### Features

- Attachment kit to attach BKM-10R to 24-inch monitors

#### Applicable Models

BVM-D24E1WA Color Video Monitor  
BVM-D24E1WE Color Video Monitor  
BVM-D24E1WU Color Video Monitor  
BVM-F24A CineAlta Color Video Monitor  
BVM-F24U CineAlta Color Video Monitor



### BKM-41HD HD SDI Input Adaptor

#### Features

- HD SDI input with monitor output and component input/output

#### Applicable Models

BVM-D20F1A Color Video Monitor  
BVM-D20F1E Color Video Monitor  
BVM-D20F1U Color Video Monitor  
BVM-D24E1WA Color Video Monitor  
BVM-D24E1WE Color Video Monitor  
BVM-D24E1WU Color Video Monitor  
BVM-D32E1WE Color Video Monitor  
BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

HD SDI:

BNC

Monitor output

Component:

Loop-through BNC

##### Dimensions\*

50 (W) x 256 (H) x 245 (D) mm  
(2 x 10 1/8 x 9 3/4 inches)

##### Mass

Approx. 1280 g (2 lb 13 oz)



\* The BKM-41HD occupies 2 slots.

## Monitor Accessories

### BKM-42HD HD SDI Input Adaptor

#### Features

- HD SDI input with monitor output and component input/output

#### Applicable Models

BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

HD SDI:

- BNC (x 2)
- Monitor output (x 2)

Component:

- Loop-through BNC

##### Dimensions\*

50 (W) x 256 (H) x 245 (D) mm  
 (2 x 10 1/8 x 9 3/4 inches)

##### Mass

Approx. 1400 g (3 lb 1 oz)



\* The BKM-42HD occupies 2 slots.

### BKM-48X HD Analog Input Expansion Adaptor

#### Features

- HD, composite, Y/C or component input/output

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-14F5E Color Video Monitor  
 BVM-14F5U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 BVM-D32E1WE Color Video Monitor  
 BVM-D32E1WU Color Video Monitor

#### Specifications

##### Inputs/outputs

Video:

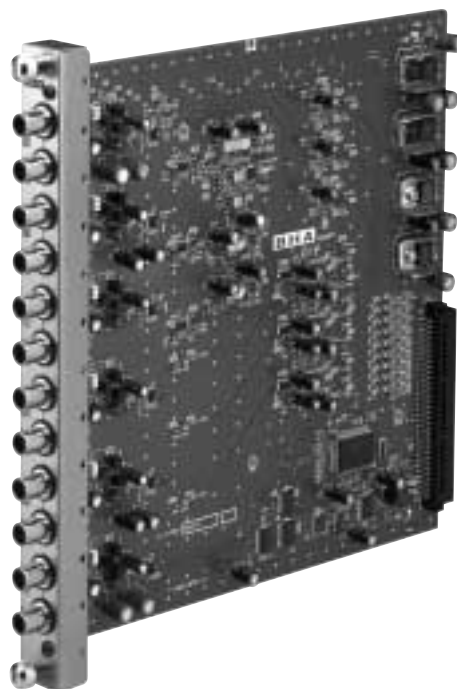
- Loop-through BNC (x 6)

##### Dimensions

25 (W) x 256 (H) x 245 (D) mm  
 (31/32 x 10 1/8 x 9 3/4 inches)

##### Mass

660 g (1 lb 7oz)



## Monitor Accessories

### DCC-XLR4 Car Battery Cord

**Applicable Models**

PVM-5041Q Color Video Monitor  
PVM-6041QM Color Video Monitor  
TU-1040E TV Tuner Unit  
TU-1041U TV Tuner Unit

**Specifications**

**Power requirements**

12 V/24 V DC

**Output voltage**

Max. 5 A

**Cord length**

3 m (9 ft 9 inches)

**Mass**

175 g (6 oz)



### MB-502B Mounting Bracket

**Features**

●19-inch EIA standard rack mounting bracket for 14-inch monitors

**Applicable Models**

PVM-135 Black and White Video Monitor  
PVM-136 Black and White Video Monitor  
PVM-137 Black & White Monitor  
PVM-145E Black and White Video Monitor  
PVM-146E Black and White Video Monitor  
PVM-14L1 Color Video Monitor  
PVM-14L2 Color Video Monitor

**Specifications**

**Dimensions**

483 (W) x 355 (H) x 302 (D) mm  
(19 1/8 x 14 x 12 inches)

**Mass**

3.8 kg (8 lb 6 oz)



### MB-502C Mounting Bracket

**Features**

●19-inch EIA standard rack mounting bracket for 14-inch monitors

**Applicable Models**

PVM-14L1 Color Video Monitor  
PVM-14L2 Color Video Monitor

**Specifications**

**Dimensions**

483 (W) x 355 (H) x 302 (D) mm  
(19 1/8 x 14 x 12 inches)

**Mass**

3.8 kg (8 lb 6 oz)



## Monitor Accessories

### MB-506 Mounting Bracket

#### Features

- EIA standard 19-inch rack mounting bracket for mounting one or two 6.5-inch LCD monitors

#### Specifications

##### Tally

2

##### Tilt angle

+8° to -10°

##### Dimensions

482 (W) x 177 (H) x 200 (D) mm  
(19 x 7 x 7 7/8 inches)

##### Mass

Approx. 2.0 kg (4 lb 6 oz)



### MB-507 Rack Mounting Bracket

#### Features

- 19-inch EIA standard rack mounting bracket for 6-inch and 9-inch monitors

### MB-508 Mounting Panel

#### Features

- Mounting panel for 19-inch EIA standard rack for 6-inch monitors

#### Applicable Models

PVM-5041Q Color Video Monitor  
PVM-6041QM Color Video Monitor

#### Specifications

##### Dimensions

146 (W) x 168.5 (H) x 63 (D) mm  
(5 3/4 x 6 3/4 x 2 1/2 inches)

##### Mass

200 g (7 oz)



## Monitor Accessories

### MB-509 Mounting Panel

#### Features

- Mounting panel for 19-inch EIA standard rack for 9-inch monitors

#### Applicable Models

BVM-D9H5A Color Video Monitor  
 BVM-D9H5E Color Video Monitor  
 BVM-D9H5U Color Video Monitor  
 PVM-95 Black and White Video Monitor  
 PVM-95E Black and White Video Monitor  
 PVM-96 Black and White Video Monitor  
 PVM-96E Black and White Video Monitor  
 PVM-97 Black & White Monitor  
 PVM-9L1 Color Video Monitor  
 PVM-9L2 Color Video Monitor  
 PVM-9L3 Color Video Monitor

#### Specifications

##### Dimensions

217 (W) x 212.5 (H) x 63 (D) mm  
 (8 5/8 x 8 3/8 x 2 1/2 inches)

##### Mass

400 g (14 oz)



### MB-510 Mounting Attachment

#### Features

- Mounting attachment for attaching BKM-10R control unit to monitors

#### Applicable Models

BVM-14F1E Color Video Monitor  
 BVM-14F1U Color Video Monitor  
 BVM-20F1E Color Video Monitor  
 BVM-20F1U Color Video Monitor  
 BVM-D14H1A Color Video Monitor  
 BVM-D14H1E Color Video Monitor  
 BVM-D14H1U Color Video Monitor  
 BVM-D20F1A Color Video Monitor  
 BVM-D20F1E Color Video Monitor  
 BVM-D20F1U Color Video Monitor  
 BVM-D24E1WA Color Video Monitor  
 BVM-D24E1WE Color Video Monitor  
 BVM-D24E1WU Color Video Monitor  
 TU-1040E TV Tuner Unit  
 TU-1041U TV Tuner Unit



## Monitor Accessories

### MB-512 Mounting Bracket

#### Applicable Models

TU-1040E TV Tuner Unit

TU-1041U TV Tuner Unit

#### Specifications

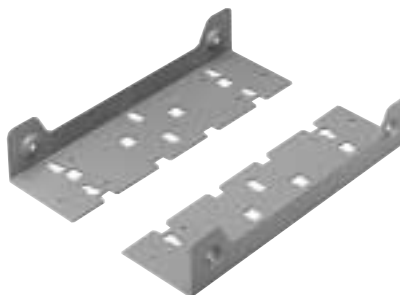
##### Dimensions

63 (W) x 40 (H) x 210 (D) mm

(2 1/2 x 1 5/8 x 8 3/8 inches)

##### Mass

260 g (9 oz)



### MB-519 Mounting Panel

#### Features

- Mounting panel for 19-inch rack for 9-inch monitors

#### Applicable Models

BVM-D9H1A Color Video Monitor

BVM-D9H1E Color Video Monitor

BVM-D9H1U Color Video Monitor

### MB-520 Mounting Bracket

#### Features

- 19-inch EIA standard rack mounting bracket for 6-inch and 9-inch monitors

#### Applicable Models

BVM-D9H1A Color Video Monitor

BVM-D9H1E Color Video Monitor

BVM-D9H1U Color Video Monitor

BVM-D9H5A Color Video Monitor

BVM-D9H5E Color Video Monitor

BVM-D9H5U Color Video Monitor

PVM-5041Q Color Video Monitor

PVM-6041QM Color Video Monitor

PVM-95 Black and White Video Monitor

PVM-95E Black and White Video Monitor

PVM-96 Black and White Video Monitor

PVM-96E Black and White Video Monitor

PVM-97 Black &amp; White Monitor

PVM-9L1 Color Video Monitor

PVM-9L2 Color Video Monitor

PVM-9L3 Color Video Monitor

#### Specifications

##### Dimensions

479 (W) x 222 (H) x 422.3 (D) mm

(18 7/8 x 8 3/4 x 16 3/4 inches)

##### Mass

2.7 kg (5 lb 15 oz)



## Monitor Accessories

### MB-521 Mounting Bracket

#### Features

- 19-inch EIA standard rack mounting bracket for 14-inch monitors

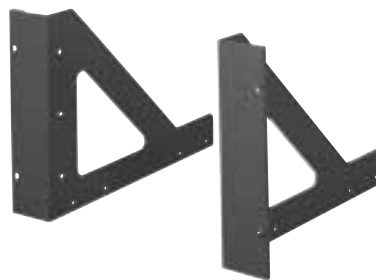
#### Applicable Models

PVM-14L3 Color Video Monitor  
PVM-14L4 Color Video Monitor  
PVM-14L5 Color Video Monitor  
PVM-D14L5A Color Video Monitor

#### Specifications

##### Mass

3.2 kg (7 lb 1 oz)



### MB-522A Rack-Mount Bracket

7U size Rack-Mount Bracket for LMD-171W

#### Applicable Models

LMD-172W LCD Monitor

#### Specifications

##### Dimension

310 (W) x 483 (HD) x 74 (D) mm  
12 1/4 (W) x 19 1/8 (H) x 3 (D) inches

##### Mass

Approx.1.4kg (3 lb 1oz)



### MB-523 Rack-Mount Bracket

10U size Rack-Mount Bracket for LMD-210

#### Applicable Models

LMD-212 LCD Monitor

#### Supplied Accessories

Screws (PSW4 x 12) (6)  
Operating Instructions (1)

#### Specifications

##### -Dimensions-

483 (W) x 444.3 (H) x 87 (D) mm  
19 1/8 (W) x 17 1/2 (H) x 3 1/2 (D) inches

##### -Mass-

3 Kg  
6 lb 10 oz



## Monitor Accessories

### MB-524 Rack-Mount Bracket

7U size Rack-Mount Bracket for LMD-150

#### Applicable Models

LMD-152 LCD Monitor

#### Specifications

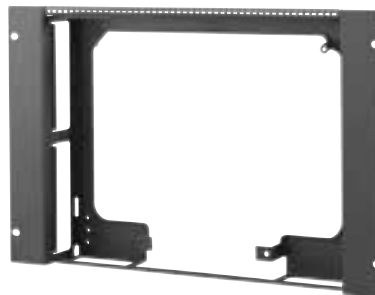
##### Dimension

Approx. 482 (W) x 308 (H) x 70 (D) mm

Approx. 19 (W) x 12 1/8 (H) x 2 3/4 (D) inches

##### Mass

Approx. 1.4 kg (3 lb 1 oz)



### MB-525 Mounting Bracket

EIA standard 19-inch rack mounting bracket for mounting one or two LMD-9050s

#### Applicable Models

LMD-9050 LCD monitor



### MB-526 Rack-Mount Bracket

8U size Rack-Mount Bracket for LMD-1420 and LMD-1410

#### Applicable Models

LMD-1410 LCD monitor

LMD-1420 LCD monitor



### MB-527 Rack-Mount Bracket

10U size Rack-Mount Bracket for LMD-2020 and LMD-2010

#### Applicable Models

LMD-2010 LCD monitor

LMD-2020 LCD monitor



## Monitor Accessories

### MB-528 Mounting Panel

Mounting panel for 19-inch EIA standard rack for LMD-9050

Applicable Models  
LMD-9050 LCD monitor



### SLR-102 Slide Rail

#### Features

- 19-inch EIA standard rack slide rail for 14-inch monitors
- Used with the mounting bracket

#### Applicable Models

PVM-135 Black and White Video Monitor  
PVM-136 Black and White Video Monitor  
PVM-137 Black & White Monitor  
PVM-145E Black and White Video Monitor  
PVM-146E Black and White Video Monitor  
PVM-14L1 Color Video Monitor  
PVM-14L2 Color Video Monitor



### SLR-103A Slide Rail

#### Features

- 19-inch EIA standard rack slide rail for 20-inch monitors

#### Applicable Models

PVM-20L1 Color Video Monitor  
PVM-20L2 Color Video Monitor



## Monitor Accessories

### SLR-103C Slide Rail

#### Features

- 19-inch EIA standard rack slide rail for 20-inch monitors

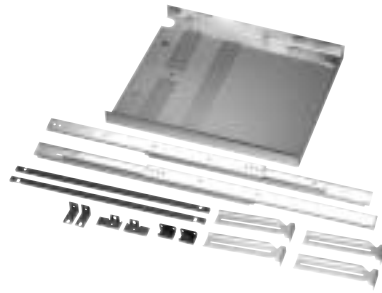
#### Applicable Models

PVM-20L1 Color Video Monitor  
PVM-20L2 Color Video Monitor

#### Specifications

##### Mass

4.8 kg (10 lb 9 oz)



### SLR-104 Slide Rail

#### Features

- 19-inch EIA standard rack slide rail for 20-inch monitors

#### Applicable Models

PVM-20L4 Color Video Monitor  
PVM-20L5 Color Video Monitor  
PVM-D20L5A Color Video Monitor

#### Specifications

##### Mass

3.6 kg (7 lb 15 oz)



### SMF-600 Display IF Cable

Display Interface Cable used to interface the MEU-WX1 and LMD monitors.

#### Features

- Cable length 10m ●Two connectors, XLR-4pin for power supply and DVI-D for video/control signals

When used with LMD-320W, the AC power connector cannot be used.

#### Applicable Models

LMD-152 LCD Monitor  
LMD-172W LCD Monitor  
LMD-212 LCD Monitor  
LMD-232W LCD monitor  
LMD-322W LCD Monitor  
MEU-WX2 Multiformat Engine Unit



## Monitor Accessories

### SU-557 Monitor Stand

#### Specifications

##### Tilt Angle

0°/10°/20°/30°

##### Dimensions

With the LMD-181MD:

432 (W) x 481 (H) x 244 (D) mm  
(17 1/8 x 19 x 9 5/8 inches)

With the LMD-151MD:

393 (W) x 432 (H) x 244 (D) mm  
(15 1/2 x 17 1/8 x 9 5/8 inches)

##### Mass

Approx. 2.1Kg (4 lb 10 oz)



### SU-558 Monitor Stand

#### Monitor Stand for LMD-170W and LMD-230W

#### Applicable Models

LMD-152 LCD Monitor  
LMD-172W LCD Monitor  
LMD-212 LCD Monitor  
LMD-232W LCD monitor

#### Specifications

##### Mass

4.9 kg (10 lb 13 oz)

##### Size

240.2 (W) x 250.3 (D) x 191.6 (H) mm (9 1/2 x 9 7/8 x 7 5/8 inches)

##### Stand movable range

Tilting angle of a monitor  
74°

Tilting angle of the stand arm  
64°



## Monitor Accessories

### SU-559 Monitor Stand

Monitor Stand for LMD-320W

Applicable Models

LMD-322W LCD Monitor

Supplied Accessories

Front Top Cover (1)

Rear Top Cover (1)

Holders (2)

Screws A (2)

Screws B (4)

Screws C (2)

Specifications

Mass

32 kg (70 lb 9 oz)

Size

602 (W) x 500 (D) x 676 (H) mm

23 11/16 (W) x 19 11/16 (D) x 26 5/8 (H)

inches

Tilt angle

45°



### SU-560 Monitor Stand

Monitor Stand for Medical LCD monitor

Features

●Tilt angle of 0° to 28° ●VESA mounting with 100 mm spacings

Supplied Accessories

VESA cover (1)

Screws (1)

Specifications

Mass

Approx. 7.5 Kg (16 lb 9 oz)



Monitor Accessories

TU-1040E TV Tuner Unit

Features

●TV tuner unit compatible with various TV broadcast systems: B/G/H, I and D/K ●Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket



Applicable Models

PVM-14L2 Color Video Monitor  
PVM-20L2 Color Video Monitor  
PVM-6041QM Color Video Monitor  
PVM-9L2 Color Video Monitor  
PVM-9L3 Color Video Monitor

Supplied Accessories

AC Power Cord (1)  
AC Plug Holder (1)  
Instruction Manual (1)

Optional Accessories

NP-1B Rechargeable battery pack  
BC-1WDCE Battery Charger  
BC-410CE Battery Charger  
AC-550CE AC Adaptor  
MB-512 Mounting Bracket

MB-510 Mounting Attachment  
BP-90A Rechargeable Ni-Cd Battery Pack  
DC-210 Battery Case  
DCC-XLR4 Car Battery Cord

Specifications

General

Television system:  
B/G/H, L, I and D/K  
Power requirements:  
AC: 100 to 240 V, 50/60 Hz  
DC: 12 V (with NP-1B or AC-550CE)  
Power consumption:  
AC: 15 W  
DC: 10 W

Dimensions:

212 (W) x 49.3 (H) x 361 (D) mm  
(8 3/8 x 2 x 14 1/4 inches)

Mass:

2.05 kg (4 lb 8 oz)

Inputs/outputs

Antenna:  
75  $\Omega$  external antenna terminal for VHF/UHF  
Video output:  
BNC, 1.0 Vp-p, sync negative, 75  $\Omega$   
Audio output:  
Phono, -5 dBu, less than 5 k $\Omega$   
Control S:  
Loop-through stereo mini jack, 5.0 Vp-p  
**Regulation compliance**  
EN60065 (SEMKO), CE (EMC, LVD), Italy  
PTT, BZT, C-Tick Mark

## Monitor Accessories

# TU-1041U TV Tuner Unit

### Features

- TV tuner unit capable of receiving 181 VHF, UHF and cable TV channels
- Mountable into a 19-inch EIA standard rack with the optional rack mounting bracket

### Applicable Models

PVM-14L2 Color Video Monitor  
PVM-20L2 Color Video Monitor  
PVM-5041Q Color Video Monitor  
PVM-9L2 Color Video Monitor  
PVM-9L3 Color Video Monitor

### Supplied Accessories

AC Power Cord (1)  
AC Plug Holder (1)  
Instruction Manual (1)

### Optional Accessories

NP-1B Rechargeable battery pack  
BC-1WD Battery Charger  
BC-410 Battery Charger  
AC-550 AC Adaptor  
MB-512 Mounting Bracket  
MB-510 Mounting Attachment  
BP-90A Rechargeable Ni-Cd Battery Pack  
DC-210 Battery Case  
DCC-XLR4 Car Battery Cord

### Specifications

#### General

Television system:

American TV standard

Channel coverage:

VHF: 2 to 13

UHF: 14 to 69

Cable TV: 1 to 125

Power requirements:

AC: 100 to 240 V\*, 50/60 Hz

DC: 12 V (with NP-1B or AC-550CE)

Power consumption:

AC: max. 12 W

DC: 10 W

Dimensions:

212 (W) x 49.3 (H) x 361 (D) mm

(8 3/8 x 2 x 14 1/4 inches)

Mass:

Approx. 2 kg (4 lb 7 oz)

#### Inputs/outputs

Antenna:

75  $\Omega$  external antenna terminal for

VHF/UHF

Video output:

BNC, 1.0 Vp-p, sync negative, 75  $\Omega$

Audio output:

Phono, -5 dBu, less than 5 k $\Omega$

Control S:

Loop-through stereo mini jack, 5.0 Vp-p

#### Regulation compliance

UL-1409, CSA C22.2No.1, FCC TV receiver, IC TV receiver



## Monitor Accessories

### VF-504 Monitor ENG Kit

#### Features

- Monitor hood and cord reel for use in the field

#### Applicable Models

PVM-5041Q Color Video Monitor  
PVM-6041QM Color Video Monitor

#### Specifications

##### Dimensions

Hood:

159 (W) x 172 (H) x 160 (D) mm  
(6 3/8 x 6 7/8 x 6 3/8 inches)

##### Mass

400 g (14 oz)



### VF-505 Monitor ENG Kit

#### Features

- Monitor hood and cord reel for use in the field

#### Specifications

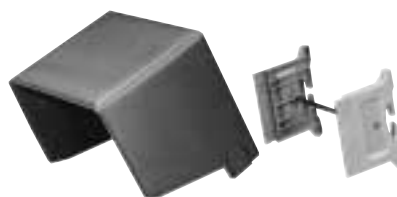
##### Dimensions

Hood:

230 (W) x 215 (H) x 200 (D) mm  
(9 1/8 x 8 1/2 x 7 7/8 inches)

##### Mass

500 g (1 lb 1 oz)



### VF-508 Monitor ENG Kit

#### Features

- Viewing hood and connector protector for use in the field

#### Applicable Models

BVM-D9H1A Color Video Monitor  
BVM-D9H1E Color Video Monitor  
BVM-D9H1U Color Video Monitor  
BVM-D9H5A Color Video Monitor  
BVM-D9H5E Color Video Monitor  
BVM-D9H5U Color Video Monitor  
HDW-730S HDCAM Camcorder  
HDW-750 HDCAM Camcorder  
HDW-750P HDCAM Camcorder  
PVM-9L2 Color Video Monitor  
PVM-9L3 Color Video Monitor



## Monitor Accessories

### VF-509 Monitor ENG Kit

Viewing hood, carrying handle and connector protector for use in the field

Applicable Models  
LMD-9050 LCD monitor



Audio Mixer & Consoles

DMX-P01..... 696

SRP-X500P..... 698

SRP-X500P..... 700

SRP-X700P..... 702

SRP-X700P..... 704

## Audio Mixer & Consoles

### DMX-P01 Portable Digital Mixer

#### Features

- Portable, digital field-mixer designed for ENG/EFP application
- Compact (266 x 68 x 206 mm) and lightweight (Approx. 2.2 kg)
- 24-bit A/D and D/A converters and internal 32-bit DSP for excellent sound quality
- 4 microphone/line inputs with +48 V mic power (on/off)
- 2 channels of balanced analog output and AES/EBU digital output (stereo) via XLR-type connectors
- Digital cascade input with phono connector
- Coaxial output connector for mix-bus output or S/PDIF digital output
- Selectable sampling rate: 48 kHz or 96 kHz
- Full control of every parameter from the front panel using physical and menu-driven controls
- Digital limiters on both inputs and outputs, and digital compressors on outputs
- A scene memory recall feature to instantly recall up to ten different user-defined parameter settings or factory default settings
- A power-on memory function recalls parameters in three different ways: default factory settings, the last used settings or parameters of one specific scene memory
- Easy-to-read backlit LCD panel displays output levels and setup menus, and allows various parameter settings
- Meter calibrations can be selected from six types: VU, BBC type, DIN type, NORDIC type, IEC type1, and dBFS
- Camera-audio return-level check via 12-pin connector
- Panel lock and parameter lock function
- Adjustable HPF with two user settings
- Operates on eight AA-size alkaline (LR6) batteries or external DC 10 to 15 V power
- Spare battery-compartment for quick battery change



#### Applicable Models

PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-510P XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)

#### Supplied Accessories

Spare battery compartment (1)  
 Meter scale sheets (6)  
 Ferrite clamp filters (2)  
 12-pin male connector (1)  
 Rubber foot (4)

# Audio Mixer & Consoles

## Specifications

### Inputs

Channel inputs (analog):  
4 ch, XLR-3-31 (x 4), electrically balanced, microphone power; +48 V (on/off)  
Mic level: -70 to -30 dBu (max. -10 dBu), 2.2 kΩ or more  
Line level: -30 to +10 dBu (max. +30 dBu), 10 kΩ or more

Cascade input (digital):  
2 busses (L/R), coaxial, 75 Ω

### Outputs

Master outputs (analog):  
2 ch (L/R), -60/-20/+4 dBu (max. +24 dBu), XLR-3-32 (x 2), balanced, 600 Ω load or more

Master outputs (digital):  
2 ch (L/R), AES/EBU, XLR-3-32 (x 1), 110 Ω load  
2 ch (L/R), IEC 60958 coaxial (x 1), 75 Ω load

Tape outputs (analog):  
2 ch (L/R), -10 dBu (max. +10 dBu), 3.5 mm dia. TRS jack, unbalanced, 10 kΩ load or more

Camera send/return (analog):  
2 ch (L/R), 12-pin, female, balanced  
Send level: -60/-20/+4 dBu (max. +24 dBu), 600 Ω load or more  
Return level: 0 dBu (max. +20 dBu), 10 kΩ

A/D converter:  
24 bits

D/A converter:  
24 bits

Sampling frequency:  
48 kHz or 96 kHz

Internal signal processing:  
32 bits

Low cut filter:  
70 to 400 Hz (at 96 kHz sampling frequency), 12 dB/octave  
50 to 400 Hz (at 48 kHz sampling frequency), 12 dB/octave

Input limiter:  
Threshold: 0 to +20 dB in 2 dB steps

Output limiter/compressor:  
Threshold: -20 to +10 dB (2 dB steps)  
Ratio: 2:1, 4:1, 6:1, or 10:1  
Attack time: 0.5 ms, 10 ms, or 100 ms  
Release time: 0.1 s, 1.0 s, or 2.0 s

Frequency response:  
20 Hz to 40 kHz +0.5/-3.0 dB (at 96 kHz sampling frequency)  
20 Hz to 20 kHz +0.5/-1.0 dB (at 48 kHz sampling frequency)

Total harmonic distortion:  
0.05% or less

Equivalent input noise:  
-130 dBu, 150 Ω terminated, IHF-A (mic input, typical)

Crosstalk:  
-90 dB (1kHz) or less

Delay time:  
1 ms or less at 96 kHz sampling frequency, including A/D D/A conversions  
2 ms or less at 48 kHz sampling frequency, including A/D D/A conversions

Level meter calibration:  
VU, BBC-type DIN-type, NORDIC-type, IEC-type1, dBFS (selectable)

Headphone output:  
1/4-inch TRS jack (x 1) and 3.5-mm dia. TRS jack (x 1) with level control (300 mW, 32 Ω load or more)

Operating voltage:  
Internal: DC 12 V (eight AA-size (LR6) alkaline batteries)  
External: DC 10 to 15 V via XLR 4-pin connector and DC jack

Battery life (with Sony AA-size alkaline batteries (LR6SG) at 25 °C):  
Approximately 5 hours (when the sampling frequency is 48 kHz and the LCD backlight and +48 V microphone power are not used.)

Power supply (to wireless microphone):  
DC 10 to 15 V via 4-pin Hirose connector, female

Operating temperature:  
0 to +45 °C (+32 to +113 °F)

Storage temperature:  
-20 to +60 °C (-4 to +140 °F)

Dimensions (W x H x D):  
266 x 68 x 206 mm (10 1/2 x 2 3/4 x 8 1/8 inches)

Mass:  
Approx. 2.2 kg (4 lb 13 oz)

## Audio Mixer & Consoles

# SRP-X500P Digital Powered Mixer (120 V)

The SRP-X500P is an all-in-one digital A/V powered mixer providing an effective solution for smooth multimedia presentations. Eliminating complicated operations, cumbersome installation procedures, and complex adjustments of A/V parameters for optimized visuals and sound, the SRP-X500P is an ideal choice for use in small to mid-scale presentation systems - for conference rooms, corporate boardrooms and classrooms to houses of worship.

### Features

- All-in-One design - contains the functions of a high-quality digital audio mixer, power amplifier, wireless mic receiver, RGB video switcher, feedback reducer and equalizer in a compact 3U high unit
- Nine system presets allow quick setup of the audio system by recalling the one best suited for the venue
- High-Quality digital sound with Auto Gain Control (AGC), equalizer, compressor and feedback reducer
- Integrated wireless tuner unit slots accommodate UWP-X series or WRU-806A/806B tuner modules
- Comprehensive remote control via RS-232C, Control S and PARALLEL port
- Versatile interfaces including composite and component video inputs, computer RGB input and output, four microphone inputs and two stereo line inputs
- Built-in four-channel digital amplifier
- Supplied SRP-X500P Manager Software allows the control of detailed settings

### Supplied Accessories

AC power cord (1)  
Operation manual (1)  
foot (4)  
SRP-X500P Manager Software CD-ROM (1)  
Antenna (2)

### Optional Accessories

AN-820A UHF Antenna  
WRU-806A UHF Synthesized Tuner Unit (62CE7)  
WRU-806A UHF Synthesized Tuner Unit (69CE7)  
UWP-X1 UHF Synthesized Wireless Microphone Package (67CE7)  
UWP-X1 UHF Synthesized Wireless Microphone Package (62CE7)  
UWP-X2 UHF Synthesized Wireless Microphone Package (62CE7)  
UWP-X2 UHF Synthesized Wireless Microphone Package (67CE7)



# Audio Mixer & Consoles

## Specifications

### General

Power requirements

AC 120 V, 60 Hz

Power consumption

120 W

Operating temperature

0 to +40 °C (+32 to +104 °F)

Storage temperature

-20 to +60 °C (-4 to +140 °F)

Dimensions (W x H x D)

482 x 132 x 357 mm (19 x 5 1/4 x 14 inches)

Mass

Approx. 12 kg (26 lb 3 oz)

### Electrical characteristics

Composite video

Color system

NTSC/PAL/SECAM

Frequency response

50 Hz to 10 MHz

Level

1.0 Vp-p (75 Ω)

Component video

Color system

NTSC/PAL

Frequency response

50 Hz to 150 MHz

Level

Y: 1.0 Vp-p (75 Ω), R-Y/B-Y: 0.7 Vp-p (75 Ω)

RGB

Frequency response

50 Hz to 150 MHz

Resolution

SXGA: 1280 x 1024 pixels, 60 Hz, supporting 480p/1080i

Level

R/G/B: 0.7 Vp-p (75 Ω), Sync/HD, VD: 1 to 5 Vp-p (47 kΩ) sync positive/negative

Audio (analog)

Frequency response

Line input to Line output: 20 Hz to 20 kHz ±0.5 dB (1 kHz reference)

T.H.D.

Line input to Line output: Less than 0.01% (1 kHz)

S/N ratio

Line input to Line output: More than 94 dB (IHF A)

Crosstalk

Line input to Line output: Less than -80 dB (1 kHz)

Others

Antenna in (a/b)

BNC x2, DC +9 V out

Microphone power supply

DC +48 V, MIC 1 to 4 inputs

### Audio inputs

MIC/WL 1, 2

XLR-3-31 type, balanced, mono, -60 to -30 dBu (peak level: -37 to -7 dBu), more than 2.2 kΩ

MIC 3, 4

XLR-3-31 type, balanced, mono, -60 to -30 dBu (peak level: -37 to -7 dBu), more than 2.2 kΩ

LINE

Phono x 2, unbalanced, stereo, -30 to 0 dBu (peak level: +10 dBu), more than 10 kΩ

AV/RGB (A to E)

Phono x 2, unbalanced, stereo, -30 to 0 dBu (peak level: +10 dBu), more than 10 kΩ

### Audio output

LINE 1 to 4

Phono x 1, unbalanced, mono, -5 dBu (peak level: +15 dBu), more than 10 kΩ

### Speaker outputs

CH1/CH2

Screw-type binding terminal x 4, 4 to 16 Ω, 90 W (4 Ω, 8 Ω) (\*1)

CH3/CH4 (70 V LINE)

Screw-type binding terminal x 4  
4 to 16 Ω (at low impedance), 50 W (4 Ω, 8 Ω) (\*1), 82 to 10 kΩ (at 70 V LINE), 60 W (82 Ω)

### AV/RGB inputs

VIDEO (A to C)

Phono x 1, Composite

COMPONENT/RGB (D, E)

D-sub 15-pin, Component/RGB

### AV/RGB outputs

VIDEO

Phono x 1, Composite

COMPONENT/RGB

D-sub 15-pin, Component/RGB

### Remote control terminal

RS-232C (PROJECTOR CONTROL )

D-sub 9-pin (male)

Function: input selection, power on/standby

RS-232C (REMOTE)

D-sub 9-pin (male)

Function: setting of SRP-X500P audio and switch functions from a PC running the SRP-X500P Manager software

PARALLEL IN

D-sub 25 pin (female) (Make-contact CMOS level, active low)

Function: AV selection, power on/off, scene recall, volume, volume up/down, muting

PARALLEL OUT

D-sub 25 pin (female) (Open collector) Function: output status of parallel input function

PROJECTOR IN (Control-S) (\*2)

Mini jack

Function: for the connection of projector remote commander

PROJECTOR OUT (Control-S) (\*2)

Mini jack

Function: input selection, power on/standby

(\*1)The same power rating can be acquired for both 8 and 4 Ω speaker impedance. Connect the speakers so the total speaker impedance is 4 Ω or higher (\*2)For the VPL-PX15 LCD data projector only

## Audio Mixer & Consoles

# SRP-X500P Digital Powered Mixer (230 V)

The SRP-X500P is an all-in-one digital A/V powered mixer providing an effective solution for smooth multimedia presentations. Eliminating complicated operations, cumbersome installation procedures, and complex adjustments of A/V parameters for optimized visuals and sound, the SRP-X500P is an ideal choice for use in small to mid-scale presentation systems - for conference rooms, corporate boardrooms and classrooms to houses of worship.

### Features

- All-in-One design - contains the functions of a high-quality digital audio mixer, power amplifier, wireless mic receiver, RGB video switcher, feedback reducer and equalizer in a compact 3U high unit
- Nine system presets allow quick setup of the audio system by recalling the one best suited for the venue
- High-Quality digital sound with Auto Gain Control (AGC), equalizer, compressor and feedback reducer
- Integrated wireless tuner unit slots accommodate UWP-X series or WRU-806A/806B tuner modules
- Comprehensive remote control via RS-232C, Control S and PARALLEL port
- Versatile interfaces including composite and component video inputs, computer RGB input and output, four microphone inputs and two stereo line inputs
- Built-in four-channel digital amplifier
- Supplied SRP-X500P Manager Software allows the control of detailed settings

### Supplied Accessories

AC power cord (1)  
Operation manual (1)  
foot (4)  
SRP-X500P Manager Software CD-ROM (1)  
Antenna (2)

### Optional Accessories

AN-820A UHF Antenna  
WRU-806A UHF Synthesized Tuner Unit (62CE7)  
WRU-806A UHF Synthesized Tuner Unit (69CE7)  
UWP-X1 UHF Synthesized Wireless Microphone Package (67CE7)  
UWP-X1 UHF Synthesized Wireless Microphone Package (62CE7)  
UWP-X2 UHF Synthesized Wireless Microphone Package (62CE7)  
UWP-X2 UHF Synthesized Wireless Microphone Package (67CE7)



Audio Mixer & Consoles

Specifications

General

Power requirements

AC 230 V, 50/60 Hz

Power consumption

120 W

Operating temperature

0 to +40 °C (+32 to +104 °F)

Storage temperature

-20 to +60 °C (-4 to +140 °F)

Dimensions (W x H x D)

482 x 132 x 357 mm (19 x 5 1/4 x 14 inches)

Mass

Approx. 12 kg (26 lb 3 oz)

Electrical characteristics

Composite video

Color system

NTSC/PAL/SECAM

Frequency response

50 Hz to 10 MHz

Level

1.0 Vp-p (75 Ω)

Component video

Color system

NTSC/PAL

Frequency response

50 Hz to 150 MHz

Level

Y: 1.0 Vp-p (75 Ω), R-Y/B-Y: 0.7 Vp-p (75 Ω)

RGB

Frequency response

50 Hz to 150 MHz

Resolution

SXGA: 1280 x 1024 pixels, 60 Hz, supporting 480p/1080i

Level

R/G/B: 0.7 Vp-p (75 Ω), Sync/HD, VD: 1 to 5 Vp-p (47 kΩ) sync positive/negative

Audio (analog)

Frequency response

Line input to Line output: 20 Hz to 20 kHz ±0.5 dB (1 kHz reference)

T.H.D.

Line input to Line output: Less than 0.01% (1 kHz)

S/N ratio

Line input to Line output: More than 94 dB (IHF A)

Crosstalk

Line input to Line output: Less than -80 dB (1 kHz)

Others

Antenna in (a/b)

BNC x2, DC +9 V out

Microphone power supply

DC +48 V, MIC 1 to 4 inputs

Audio inputs

MIC/WL 1, 2

XLR-3-31 type, balanced, mono, -60 to -30 dBu (peak level:-37 to -7 dBu), more than 2.2 kΩ

MIC 3, 4

XLR-3-31 type, balanced, mono, -60 to -30 dBu (peak level: -37 to -7 dBu), more than 2.2 kΩ

LINE

Phono x 2, unbalanced, stereo, -30 to 0 dBu (peak level: +10 dBu), more than 10 kΩ

AV/RGB (A to E)

Phono x 2, unbalanced, stereo, -30 to 0 dBu (peak level: +10 dBu), more than 10 kΩ

Audio output

LINE 1 to 4

Phono x 1, unbalanced, mono, -5 dBu (peak level: +15 dBu), more than 10 kΩ

Speaker outputs

CH1/CH2

Screw-type binding terminal x 4, 4 to 16 Ω, 90 W (4 Ω, 8 Ω) (\*1)

CH3/CH4 (70 V LINE)

Screw-type binding terminal x 4  
4 to 16 Ω (at low impedance), 50 W (4 Ω, 8 Ω) (\*1), 82 to 10 kΩ (at 70 V LINE), 60 W (82 Ω)

AV/RGB inputs

VIDEO (A to C)

Phono x 1, Composite

COMPONENT/RGB (D, E)

D-sub 15-pin, Component/RGB

AV/RGB outputs

VIDEO

Phono x 1, Composite

COMPONENT/RGB

D-sub 15-pin, Component/RGB

Remote control terminal

RS-232C (PROJECTOR CONTROL )

D-sub 9-pin (male)

Function: input selection, power on/standby

RS-232C (REMOTE)

D-sub 9-pin (male)

Function: setting of SRP-X500P audio and switch functions from a PC running the SRP-X500P Manager software

PARALLEL IN

D-sub 25 pin (female) (Make-contact CMOS level, active low)

Function: AV selection, power on/off, scene recall, volume, volume up/down, muting

PARALLEL OUT

D-sub 25 pin (female) (Open collector) Function: output status of parallel input function

PROJECTOR IN (Control-S) (\*2)

Mini jack

Function: for the connection of projector remote commander

PROJECTOR OUT (Control-S) (\*2)

Mini jack

Function: input selection, power on/standby

(\*1)The same power rating can be acquired for both 8 and 4 Ω speaker impedance. Connect the speakers so the total speaker impedance is 4 Ω or higher (\*2)For the VPL-PX15 LCD data projector only

## Audio Mixer & Consoles

# SRP-X700P Digital Powered Mixer (120V)

### Features

●Ideal for conference rooms, lecture theaters and other presentation applications ●Contains the functions of a high-quality digital audio mixer, power amplifier, wireless mic receiver, RGB/video switcher, feedback reducer and equalizer in a compact 3U high unit ●Accepts 3 RGB/component, 3 composite and 3 S-video inputs, and selects 1 RGB/component, 1 composite, and 1 S-video for outputs ●High-quality component signals (480p/1080i) and RGB signals with 150 MHz frequency response (1280x1024 pixels, SXGA) ●Mixes wireless mic and wired mic inputs with audio from video/DVD players for 10 outputs ●24-bit AD/DA conversion at 48kHz sampling frequency ●6 mic inputs with phantom powering, 2 wireless mic (or line) inputs, and 2 line inputs ●Wireless mic slots for storing 2 WRU-806A/806B tuner modules ●200W+200W(4Ω)/150W+150W(8Ω)/max.150W (70V Line) digital power amp ●Feedback reducer, parametric EQ, LCF (100Hz), compressor/limiter, delay, automatic mixing and flexible signal routing all performed in a digital domain ●20 scene memories with quick memory recall capacity ●Remote control of SRP-X700P via USB, RS-232C or parallel ports from a PC, a system controller or a control panel ●RS-232C output port for remote control of a projector/plasma display unit ●Control-S ports for remote control of VCRs, DVD/CD/MD players and video/data projectors ●Parallel output port for remote control of environment devices ●Supplied software for comprehensive set-up and controls of SRP-X700P



### Supplied Accessories

AC power cord (1)  
IR Transmitter (1)  
Foot (4)  
Control software disk\* (1)  
Operation manual (1)

### Optional Peripherals

WRU-806A UHF Synthesized Tuner Unit (64U)  
WRU-806A UHF Synthesized Tuner Unit (66U)  
WRU-806A UHF Synthesized Tuner Unit (68U)  
WRU-806B UHF Synthesized Tuner Unit (6264U)  
WRU-806B UHF Synthesized Tuner Unit (6668U)  
AN-820A UHF Antenna

\*System requirements PC: Windows 98SE, Windows 2000, Windows ME, or Windows XP

## Audio Mixer & Consoles

### Specifications

#### Audio Inputs

##### MIC 1 to 6\*:

Mono, XLR-3-31type (x 1 each), balanced, -60 to -45 dBu (peak level: -37 to -22 dBu), 2.2 k $\Omega$  or more

##### WL (Wireless ) MIC 1 to 2\*:

Mono, XLR-3-31type (x 1 each), balanced, -60 to -45 dBu (peak level: -37 to -22 dBu), 2.2 k $\Omega$  or more

##### LINE 1 to 2\*:

Mono, XLR-3-31type (x 1 each), balanced, -10 to +4 dBu/-+10 to +24 dBu, 10 k $\Omega$  or more

##### LINE 3:

Stereo, phono (x 2), unbalanced, -10 to 0 dBu (peak level: +10 dBu to +20 dBu), 10 k $\Omega$  or more

##### LINE 4 (Selects one input source from six input sections):

A/B/C/F sections: Stereo, phono (x 2, each section), unbalanced, -10 to 0 dBu (peak level: +10 dBu to +20 dBu), 10 k $\Omega$  or more  
D/E sections: Stereo or surround, phono (x 6, each section), unbalanced, -10 to 0 dBu (peak level: +10 dBu to +20 dBu), 10 k $\Omega$  or more

\*MIC-1/2 inputs can be switched to Wireless MIC-1/2 inputs. MIC-5 input and LINE-1 input share the same connectors. MIC-6 input and LINE-2 input share the same connectors.

#### Audio Outputs

##### LINE 1 to 2:

Mono, XLR-3-32 type (x 1 each), balanced +4 dBu (peak level: +24 dBu), 600  $\Omega$  load or more

##### LINE 3 to 8:

Mono, phono (x 1 each), unbalanced, -5 dBu (peak level: +15 dBu), 10  $\Omega$  load or more

##### REC 1 to 2:

Mono, phono (x 1 each), unbalanced, -5 dBu (peak level: +15 dBu), 10  $\Omega$  load or more

#### Speaker outputs

##### Channel 1 and 2:

Screw type binding terminal (x 4\*\*), 4  $\Omega$  to 16  $\Omega$ , rated power: 150 W (8  $\Omega$ ), 200 W (4  $\Omega$ )

##### 70 V LINE:

Screw type binding terminal (x 4\*\*), 32  $\Omega$  to 10 k $\Omega$ , rated power: 150 W max.

\*\*Channel 1/2 outputs and \*70 V LINE\* output share the same connectors.

#### Video/RGB inputs

##### LINE 4 (Selects one input source from the three (A/B/C) input sections):

Composite: phono (x 1 each)

S-video: mini DIN 4-pin (x 1 each)

##### LINE 4 (Selects one input source from the three (D/E/F) input sections):

RGB or component: D-sub 15-pin (x 1 each)

#### Video/RGB outputs

##### R/G/B:

BNC ( 1 pair\*\*)

##### Y/R-Y/B-Y:

BNC (1 pair\*\*)

\*\*R/G/B outputs and Y/R-Y/B-Y outputs share the same connectors.

##### Sync/HD:

BNC (x 1)

##### VD:

BNC (x 1)

##### S-video:

Mini DIN 4-pin (x 1)

##### Composite:

BNC (x 1)

#### Remote Control Terminal

##### RS-232C (PROJECTOR CONTROL):

D-sub 9-pin (1), male, inch standard

Control function: Input signal selection, power on/off

(Applicable projectors\*\*\*\*/PDP: Sony

VPL-FX50, VPL-PX21/PX31/PX32,

PFM-42B1) (As of June, 2002)

\*\*\*\* When using a external system

controller to control a projector, all types

of projectors can be controlled via the

RS-232C interface.

##### RS-232C:

D-sub 9-pin (1), male, inch standard

Function: full control functions available on

SRP-X700P

##### USB (Front and rear):

Series B connector (2)

Function: full control functions available on

SRP-X700P

##### PARALLEL IN (12-pin):

D-sub 25-pin (1), female, milli standard

(Make-contact CMOS level, active low)

Control function: Audio/video input signal

selection (LINE 4), power on/off, scene

recall, volume control, muting, remote

control of connected products with the

control-S ports

##### PARALLEL OUT (10-pin):

D-sub 25-pin (1), female, milli standard

(Make-contact CMOS level, active low)

Function: output status of parallel input

function (except for status of controlled products with Control-S)

##### Control-S (Output 1 to 4):

Mini jack (4)

Function: Play, Stop, FF, REW, PREV, NEXT

(Applicable AV players/recorders: Sony

VHS, 8 mm VTR/Betamax VTR, DV, CD,

CD-R, MD which are equipped with a

Control-S terminal, or DVD supplied with

an IR transmitter.)

##### Control-S (PROJECTOR IN, intended for

connection with a projector remote

commander.):

Mini jack (1)

##### Control-S (PROJECTOR OUT):

Function: Input selection, power

on/standby, (applicable projectors\*\*\*\*\*:

Sony VPL-PX15/PX10, VPL-PS10,

VPL-CX11/CX10) (As of June, 2002)

\*\*\*\*\*When using a external system

controller to control a projector, all types

of projectors can be remote controlled

via the Control-S interface.

When both RGB and component signals

are transferred to the SRP-X700P, the

SRP-X700P should also be connected

to a projector/PDP via the RS-232C

interface. (This control-S interface does

not operate to switch RGB and

component signals for input.)

#### Electrical Characteristics

##### Composite Video/S-video

Color system:

NTSC/PAL/SECAM

Frequency response:

50 Hz to 10 MHz

##### Level:

1 Vp-p (75  $\Omega$ )

##### Component

Color system:

NTSC/PAL/SECAM

Frequency response:

50 Hz to 150 MHz

##### Level:

Y: 1 Vp-p (75  $\Omega$ )

R-Y: 0.7 Vp-p (75  $\Omega$ )

B-Y: 0.7 Vp-p (75  $\Omega$ )

##### RGB

Frequency response:

50 Hz to 150 MHz

Resolution

1280 x 1024 pixels

60 Hz (SXGA)

##### Level:

R/G/B: 0.7 Vp-p (75  $\Omega$ )

SYNC, HD, VD: 1 to 5 V (47 k $\Omega$ ), sync

positive/negative

##### Audio (analog)

Frequency response (Line in to Line out):

20 Hz to 20 kHz

T.H.D. (line in to line out):

0.01 % or less (1 kHz)

S/N ratio (line in to line out):

94 dB or more (IHF A)

Crosstalk (line in to line out):

-85 dB or less (1 kHz)

##### Others

Antenna IN a-b:

BNC (2), DC 9 V out

Microphone power supply:

DC 48 V, MIC 1 to 6 inputs

#### General

##### Power requirements:

AC 120 V, 50/60 Hz

##### Power consumption:

150 W

##### Operating temperature:

0  $^{\circ}$ C to +40  $^{\circ}$ C (+32  $^{\circ}$ F to +104  $^{\circ}$ F)

##### Storage temperature:

-20  $^{\circ}$ C to +40  $^{\circ}$ C (-4  $^{\circ}$ F to +140  $^{\circ}$ F)

##### Dimensions:

482 (W) x 132 (H) x 350 (D) mm, 3U

##### Mass:

Approx. 13 kg (28 lb 11 oz)

## Audio Mixer & Consoles

# SRP-X700P Digital Powered Mixer (220/230V)

### Features

●Ideal for conference rooms, lecture theaters and other presentation applications ●Contains the functions of a high-quality digital audio mixer, power amplifier, wireless mic receiver, RGB/video switcher, feedback reducer and equalizer in a compact 3U high unit ●Accepts 3 RGB/component, 3 composite and 3 S-video inputs, and selects 1 RGB/component, 1 composite, and 1 S-video for outputs ●High-quality component signals (480p/1080i) and RGB signals with 150 MHz frequency response (1280x1024 pixels, SXGA) ●Mixes wireless mic and wired mic inputs with audio from video/DVD players for 10 outputs ●24-bit AD/DA conversion at 48kHz sampling frequency ●6 mic inputs with phantom powering, 2 wireless mic (or line) inputs, and 2 line inputs ●Wireless mic slots for storing 2 WRU-806A/806B tuner modules ●200W+200W(4Ω)/150W+150W(8Ω)/max.150W (70V Line) digital power amp ●Feedback reducer, parametric EQ, LCF (100Hz), compressor/limiter, delay, automatic mixing and flexible signal routing all performed in a digital domain ●20 scene memories with quick memory recall capacity ●Remote control of SRP-X700P via USB, RS-232C or parallel ports from a PC, a system controller or a control panel ●RS-232C output port for remote control of a projector/plasma display unit ●Control-S ports for remote control of VCRs, DVD/CD/MD players and video/data projectors ●Parallel output port for remote control of environment devices ●Supplied software for comprehensive set-up and controls of SRP-X700P



### Supplied Accessories

AC power cord (1)  
 IR Transmitter (1)  
 Foot (4)  
 Control software disk\* (1)  
 Operation manual (1)

### Optional Peripherals

WRU-806B UHF Synthesized Tuner Unit (57CE7)  
 WRU-806B UHF Synthesized Tuner Unit (62CE7)  
 WRU-806B UHF Synthesized Tuner Unit (67CE7)  
 AN-820A UHF Antenna

\*System requirements PC: Windows 98SE, Windows 2000, Windows ME, or Windows XP

## Audio Mixer & Consoles

### Specifications

#### Audio Inputs

##### MIC 1 to 6\*:

Mono, XLR-3-31type (x 1 each), balanced, -60 to -45 dBu (peak level: -37 to -22 dBu), 2.2 k $\Omega$  or more

##### WL (Wireless ) MIC 1 to 2\*:

Mono, XLR-3-31type (x 1 each), balanced, -60 to -45 dBu (peak level: -37 to -22 dBu), 2.2 k $\Omega$  or more

##### LINE 1 to 2\*:

Mono, XLR-3-31type (x 1 each), balanced, -10 to +4 dBu/-+10 to +24 dBu, 10 k $\Omega$  or more

##### LINE 3:

Stereo, phono (x 2), unbalanced, -10 to 0 dBu (peak level: +10 dBu to +20 dBu), 10 k $\Omega$  or more

##### LINE 4 (Selects one input source from six input sections):

A/B/C/F sections: Stereo, phono (x 2, each section), unbalanced, -10 to 0 dBu (peak level: +10 dBu to +20 dBu), 10 k $\Omega$  or more  
D/E sections: Stereo or surround, phono (x 6, each section), unbalanced, -10 to 0 dBu (peak level: +10 dBu to +20 dBu), 10 k $\Omega$  or more

\*MIC-1/2 inputs can be switched to Wireless MIC-1/2 inputs. MIC-5 input and LINE-1 input share the same connectors. MIC-6 input and LINE-2 input share the same connectors.

#### Audio Outputs

##### LINE 1 to 2:

Mono, XLR-3-32 type (x 1 each), balanced +4 dBu (peak level: +24 dBu), 600  $\Omega$  load or more

##### LINE 3 to 8:

Mono, phono (x 1 each), unbalanced, -5 dBu (peak level: +15 dBu), 10  $\Omega$  load or more

##### REC 1 to 2:

Mono, phono (x 1 each), unbalanced, -5 dBu (peak level: +15 dBu), 10  $\Omega$  load or more

#### Speaker outputs

##### Channel 1 and 2:

Screw type binding terminal (x 4\*\*), 4  $\Omega$  to 16  $\Omega$ , rated power: 150 W (8  $\Omega$ ), 200 W (4  $\Omega$ )

##### 70 V LINE:

Screw type binding terminal (x 4\*\*), 32  $\Omega$  to 10 k $\Omega$ , rated power: 150 W max.  
\*\*Channel 1/2 outputs and \*70 V LINE\* output share the same connectors.

#### Video/RGB inputs

##### LINE 4 (Selects one input source from the three (A/B/C) input sections):

Composite: phono (x 1 each)

S-video: mini DIN 4-pin (x 1 each)

##### LINE 4 (Selects one input source from the three (D/E/F) input sections):

RGB or component: D-sub 15-pin (x 1 each)

#### Video/RGB outputs

##### R/G/B:

BNC ( 1 pair\*\*)

##### Y/R-Y/B-Y:

BNC (1 pair\*\*)

\*\*R/G/B outputs and Y/R-Y/B-Y outputs share the same connectors.

##### Sync/HD:

BNC (x 1)

##### VD:

BNC (x 1)

##### S-video:

Mini DIN 4-pin (x 1)

##### Composite:

BNC (x 1)

#### Remote Control Terminal

##### RS-232C (PROJECTOR CONTROL):

D-sub 9-pin (1), male, inch standard

Control function: Input signal selection, power on/off

(Applicable projectors\*\*\*\*/PDP: Sony

VPL-FX50, VPL-PX21/PX31/PX32,

PFM-42B1) (As of June, 2002)

\*\*\*\* When using a external system

controller to control a projector, all types

of projectors can be controlled via the

RS-232C interface.

##### RS-232C:

D-sub 9-pin (1), male, inch standard

Function: full control functions available on SRP-X700P

##### USB (Front and rear):

Series B connector (2)

Function: full control functions available on SRP-X700P

##### PARALLEL IN (12-pin):

D-sub 25-pin (1), female, milli standard

(Make-contact CMOS level, active low)

Control function: Audio/video input signal

selection (LINE 4), power on/off, scene

recall, volume control, muting, remote

control of connected products with the

control-S ports

##### PARALLEL OUT (10-pin):

D-sub 25-pin (1), female, milli standard

(Make-contact CMOS level, active low)

Function: output status of parallel input

function (except for status of controlled products with Control-S)

##### Control-S (Output 1 to 4):

Mini jack (4)

Function: Play, Stop, FF, REW, PREV, NEXT

(Applicable AV players/recorders: Sony

VHS, 8 mm VTR/Betamax VTR, DV, CD,

CD-R, MD which are equipped with a

Control-S terminal, or DVD supplied with

an IR transmitter.)

##### Control-S (PROJECTOR IN, intended for

connection with a projector remote

commander.):

Mini jack (1)

##### Control-S (PROJECTOR OUT):

Function: Input selection, power

on/standby, (applicable projectors\*\*\*\*\*:

Sony VPL-PX15/PX10, VPL-PS10,

VPL-CX11/CX10) (As of June, 2002)

\*\*\*\*\*When using a external system

controller to control a projector, all types

of projectors can be remote controlled

via the Control-S interface.

When both RGB and component signals

are transferred to the SRP-X700P, the

SRP-X700P should also be connected

to a projector/PDP via the RS-232C

interface. (This control-S interface does

not operate to switch RGB and

component signals for input.)

#### Electrical Characteristics

##### Composite Video/S-video

Color system:

NTSC/PAL/SECAM

Frequency response:

50 Hz to 10 MHz

##### Level:

1 Vp-p (75  $\Omega$ )

##### Component

Color system:

NTSC/PAL/SECAM

Frequency response:

50 Hz to 150 MHz

##### Level:

Y: 1 Vp-p (75  $\Omega$ )

R-Y: 0.7 Vp-p (75  $\Omega$ )

B-Y: 0.7 Vp-p (75  $\Omega$ )

##### RGB

Frequency response:

50 Hz to 150 MHz

Resolution

1280 x 1024 pixels

60 Hz (SXGA)

##### Level:

R/G/B: 0.7 Vp-p (75  $\Omega$ )

SYNC, HD, VD: 1 to 5 V (47 k $\Omega$ ), sync

positive/negative

##### Audio (analog)

Frequency response (Line in to Line out):

20 Hz to 20 kHz

T.H.D. (line in to line out):

0.01 % or less (1 kHz)

S/N ratio (line in to line out):

94 dB or more (IHF A)

Crosstalk (line in to line out):

-85 dB or less (1 kHz)

##### Others

Antenna IN a-b:

BNC (2), DC 9 V out

Microphone power supply:

DC 48 V, MIC 1 to 6 inputs

#### General

##### Power requirements:

AC 220/230 V, 50/60 Hz

##### Power consumption:

150 W

##### Operating temperature:

0  $^{\circ}$ C to +40  $^{\circ}$ C (+32  $^{\circ}$ F to +104  $^{\circ}$ F)

##### Storage temperature:

-20  $^{\circ}$ C to +40  $^{\circ}$ C (-4  $^{\circ}$ F to +140  $^{\circ}$ F)

##### Dimensions:

482 (W) x 132 (H) x 350 (D) mm, 3U

##### Mass:

Approx. 13 kg (28 lb 11 oz)

Audio Mixer & Consoles

Audio Mixer & Consoles

## Wired Microphones

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Wired Microphones

ECM-678 Electret Condenser Microphone

The ECM-678 is a short shotgun, electret condenser-type microphone, which delivers outstanding sound performance in all field production and broadcast studio applications.

Features

- Superior sound quality with a newly developed microphone capsule
- Superb sensitivity of -28 dB (0 dB=1 V/Pa.)
- Low inherent noise of less than 16 dB SPL
- Flat-and-wide frequency response (40 Hz to 20 kHz)
- Compact design (250 mm in length)
- Well-suited for use on Sony professional camcorders such as the HDV Series, DVCAM Series, and XDCAM Series
- Built-in low cut filter switch (M, V) for reducing the effects of undesired ambient noise
- High durability and reliability



Applicable Models

- DVW-970 Digital Betacam Camcorder
- DVW-970P Digital Betacam Camcorder
- DXC-D50H 3-chip CCD Portable Color Camera
- DXC-D50K 3-chip CCD Portable Color Camera
- DXC-D50L 3-chip CCD Portable Color Camera
- DXC-D50PH 3-chip CCD Portable Color Camera
- DXC-D50PK 3-chip CCD Portable Color Camera
- DXC-D50PL 3-chip CCD Portable Color Camera
- DXC-D50WSH 3-chip CCD Portable Color Camera
- DXC-D50WSL 3-chip CCD Portable Color Camera
- DXC-D50WSPL 3-chip CCD Portable Color Camera
- HDW-730S HDCAM Camcorder
- HVR-Z1N HDV 1080i Camcorder
- HVR-Z1P HDV 1080i Camcorder
- MSW-970 MPEG IMX camcorder
- MSW-970P MPEG IMX camcorder PAL model

- Inherent noise 16 dB SPL (\*2) or less
- Wind noise 60 dB SPL (\*2) or less
- Induction noise from external magnetic field 0 dB SPL (\*2) or less
- Maximum input sound pressure level 127 dB SPL (\*2)
- Power requirements External, DC 40 to 52 V
- Dimensions 20 dia. x 250 mm (13/16 dia. x 9 7/8 inches)
- Mass 200 g (7 oz)

(\*1) 0 dB=1 V/Pa., at 1 kHz (\*2) 0 dB SPL=20μ Pa.

Supplied Accessories

- Windscreen (1)
- Microphone holder (1)
- Microphone spacer (1)
- Connecting cord (1)
- Carrying case (1)
- Operating instructions (1)

Specifications

- Capsule type Electret condenser
- Directivity Uni-directional (Super-cardioid)
- Frequency response 40 Hz to 20 kHz
- Sensitivity (at 1 kHz) -28 dB (\*1) ±3 dB
- Output impedance (at 1 kHz) 200 Ω ±20%
- Dynamic range 111 dB or more
- Signal-to-noise ratio 78 dB or more (IEC179 A-weighted, 1 kHz, 1Pa.)

Wired Microphones

Wired Microphones

ECM-674 Electret Condenser Microphone

The ECM-674 is an affordable shotgun-type electret condenser microphone, which delivers excellent sound performance in field and studio productions.

Features

- Superior sound quality with a newly developed microphone capsule
- Excellent sensitivity of -36 dB (0 dB=1 V/Pa.)
- Low inherent-noise level of less than 19 dB SPL
- Flat-and-wide frequency response (60 Hz to 18 kHz)
- Compact and lightweight design - 268 mm in length and 220g weight
- Two-way powering - Internal AA-size battery operation or External DC (40 to 52 V) operation
- Built-in low cut filter switch (M, V) for reducing of undesired ambient noise



Applicable Models

- DVW-970 Digital Betacam Camcorder
- DVW-970P Digital Betacam Camcorder
- MSW-970 MPEG IMX camcorder
- MSW-970P MPEG IMX camcorder PAL model

Supplied Accessories

- Windscreen (1)
- Microphone spacer (1)
- Operating instructions (1)

Specifications

- Capsule type
  - Electret condenser
- Directivity
  - Uni-directional (super-cardioid)

- Frequency response
  - 60 Hz to 18 kHz
- Sensitivity (at 1 kHz)
  - 36 dB(\*1) ±3 dB
- Output impedance (at 1 kHz)
  - 200 Ω ±20%
- Dynamic range
  - 90 dB or more
- Signal-to-noise ratio
  - 74 dB or more (IEC179 A-weighted, 1 kHz, 1Pa.)
- Inherent noise
  - 19 dB SPL(\*2) or less
- Wind noise
  - 60 dB SPL(\*2) or less

- Induction noise from external magnetic field
  - 0 dB SPL(\*2) or less
- Maximum input sound pressure level
  - 109 dB SPL(\*2)
- Power requirements
  - External: DC 40 to 52 V, Battery: 1.5 V
- Dimensions
  - 20 dia. x 268 mm (13/16 dia. x 10 5/8 inches)
- Mass
  - 220 g (7 oz)

(\*1) 0 dB=1 V/Pa., at 1 kHz (\*2) 0 dB=20μ Pa.

## Wired Microphones

# ECM-672 Electret Condenser Microphone (E)

### Features

- Shotgun-type electret condenser microphone
- Super-cardioid characteristics, rejecting indirect sound
- 2-way powering: internal battery (Approx. 3,000 hours of continuous operation) or external power supply (DC 48 V)
- 2-position low-cut filter ●Suitable for mounting on Sony cameras and camcorders



### Applicable Models

DSR-250P DVCAM Camcorder  
DSR-400K DVCAM Camcorder  
DSR-400L DVCAM Camcorder  
DSR-400PK DVCAM Camcorder  
DSR-400PL DVCAM Camcorder  
DSR-450WSL DVCAM Camcorder  
DSR-450WSPL DVCAM Camcorder  
DSR-PDX10P DVCAM Camcorder  
DVW-970 Digital Betacam Camcorder  
DVW-970P Digital Betacam Camcorder  
HDW-730S HDCAM Camcorder  
MSW-970 MPEG IMX camcorder  
MSW-970P MPEG IMX camcorder PAL model

### Recommended Sony battery:

R6P (R6P battery life: approx. 3,000 h)

### Standard operating voltage:

Battery: 1.5 V

External power: DC 48 V

### Current drain:

Battery: 0.3 mA or less

AC power: 0.5 mA or less

### Dimensions:

24 dia. x 304 mm

(31/32 dia. x 12 inches)

### Mass (without battery):

230 g (8.1 oz)

### Supplied Accessories

Wind screen (1)

\*0 dB SPL = 2E-5 Pa.

### Optional Accessories

AC-148F AC Power Supply (220 to 240 V)

A-12 Table Stand

CRS-3P Cradle Suspension

### Specifications

#### Capsule type:

Electret condenser

#### Frequency response:

50 Hz to 16 kHz

#### Directivity:

Uni-directional

Effective output level at 1 kHz (0 dBm = 1 mW/1 Pa.):

-42.0 dBm

Sensitivity (0 dB = 1 V/1 Pa., at 1 kHz):

-42.0 dB  $\pm$ 2.0 dB

Output impedance at 1 kHz (balanced):

250 $\Omega$   $\pm$ 20%

#### Dynamic range:

92 dB or more

Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

72 dB or more

#### Inherent noise:

22 dB SPL or less

Induction noise from external magnetic field

(dB SPL/(1E-7) T):

0 dB SPL or less

#### Wind noise:

45 dB SPL or less

Max. Input sound pressure level:

114 dB SPL

Tone control (low-cut):

M, V

Microphone connector:

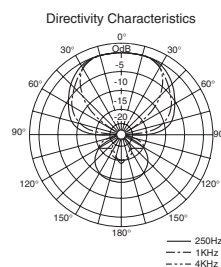
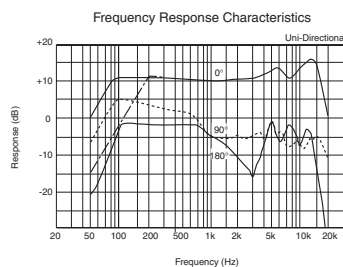
XLR-3-12C type

Available receptacle:

XLR-3-11C type

Power Supply:

Battery power (R6 or LR6) or external power supply (AC-148F or equivalent)



## Wired Microphones

# ECM-670 Electret Condenser Microphone (E)

### Features

- Shotgun-type electret condenser microphone
- Super-cardioid microphone with minimum sensitivity to ambient noise
- Compact and light weight design
- Suitable for mounting on Sony cameras and camcorders
- External power supply (DC 12 to 48 V)



### Applicable Models

DSR-250P DVCAM Camcorder  
 DSR-400K DVCAM Camcorder  
 DSR-400L DVCAM Camcorder  
 DSR-400PK DVCAM Camcorder  
 DSR-400PL DVCAM Camcorder  
 DSR-450WSL DVCAM Camcorder  
 DSR-450WSPL DVCAM Camcorder  
 DSR-PDX10P DVCAM Camcorder  
 DVW-970 Digital Betacam Camcorder  
 DVW-970P Digital Betacam Camcorder  
 DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50PH 3-chip CCD Portable Color Camera  
 DXC-D50PK 3-chip CCD Portable Color Camera  
 DXC-D50PL 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 DXC-D50WSPL 3-chip CCD Portable Color Camera  
 HDW-730S HDCAM Camcorder  
 MSW-970 MPEG IMX camcorder  
 MSW-970P MPEG IMX camcorder PAL model

Output impedance at 1 kHz (balanced):

200Ω ±20%

Dynamic range:

101 dB or more

Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

70 dB or more

Inherent noise:

24 dB SPL or less

Induction noise from external magnetic field

(dB SPL/(1E-7) T):

0 dB SPL or less

Wind noise:

60 dB SPL or less

Max. Input sound pressure level:

125 dB SPL

Microphone connector:

XLR-3-12C type

Available receptacle:

XLR-3-11C type

Power supply:

AC-148F or equivalent

Standard operating voltage:

DC12 to 48 V

Current drain:

2.4 mA or less

Dimensions:

21 dia. x 226 mm  
 (27/32 dia. x 9 inches)

Mass:

165 g (5.8 oz)

### Supplied Accessories

Wind screen (1)

Microphone holder (1)

Microphone spacer (1)

Stand adaptor (NS5/8) (1)

Stand adaptor (W3/8) (1)

### Optional Accessories

A-12 Table Stand

A-25 Table Stand

A-25N Table Stand

AC-148F AC Power Supply (220 to 240 V)

CRS-3P Cradle Suspension

### Specifications

Capsule type:

Electret condenser

Frequency response:

70 Hz to 16 kHz

Directivity:

Uni-directional

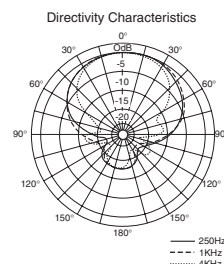
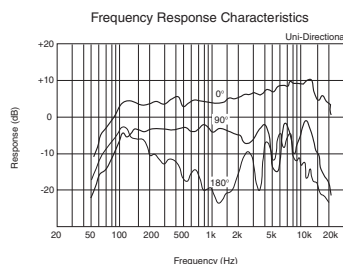
Effective output level at 1 kHz (0 dBm = 1 mW/1 Pa.):

-43.0 dBm

Sensitivity (0 dB = 1 V/1 Pa., at 1 kHz):

-44.0 dB ±3.0 dB

\*0 dB SPL = 2E-5 Pa.



Wired Microphones

ECM-166BC Lavalier Microphone

Features

- Uni-directional, electret condenser microphone
- Resistant to howling by rejecting indirect sound ●Ideal for institutional uses and sound contracting applications such as speeches, lectures and conferences
- Microphone head: 12.5 mm dia x 23.5 mm (1/2 inch dia. x 15/16 inch), 3.5 g (0.12 oz, microphone only)
- SMC9-4P type connector for use with WRT-822A/822B/860A



Supplied Accessories

- Urethane wind screen (1)
- Holder clip (1)

Specifications

- Capsule type:
  - Electret Condenser
- Directivity:
  - Uni-directional
- Frequency response:
  - 100 Hz to 10 kHz
- Sensitivity (0 dB = 1 V/Pa, at 1 kHz):
  - 45 dB (5.6 mV)
- Output impedance (at 1 kHz):
  - 2.5 kΩ ±30% (unbalanced)
- Dynamic range:
  - 96 dB or more
- Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):
  - 60 dB or more
- Inherent noise:
  - 34 dB SPL or less

- Max. input sound pressure level:
  - 130 dB SPL
- Normal operating voltage:
  - DC 3 V (supply range: DC 3 to 10 V)
- Current drain:
  - 0.4 mA or less
- Output connector:
  - SMC9-4P type
- Cable length:
  - 1.2 m (3.9 feet)
- Dimensions (microphone head):
  - 12.5 mm dia. x 23.5 mm (1/2 inch dia. x 15/16 inch)
- Mass (microphone head):
  - 3.5 g (0.12 oz)

\*0 dB SPL = 2E-5 Pa.

## Wired Microphones

### ECM-310BC Headset Microphone

#### Features

- Lightweight, headset-style microphone for sound reinforcement applications
- Wide-cardioid, electret condenser microphone provides crisp and clear sound while isolating desired sound from surrounding ambience
- Adjustable hinge and goose-neck
- 1.2 m (3.9 feet) cable terminating in an SMC9-4P type connector for use with the WRT-822A/822B/860A UHF Synthesized Transmitter

#### Applicable Models

WRT-822A UHF Synthesized Wireless Transmitter (64U)  
 WRT-822A UHF Synthesized Wireless Transmitter (66U)  
 WRT-822A UHF Synthesized Wireless Transmitter (68U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6264U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6668U)  
 WRT-8B UHF Synthesized Transmitter (6264U)  
 WRT-8B UHF Synthesized Transmitter (6668U)

#### Supplied Accessories

Urethane wind screen (1)

#### Specifications

Capsule type:

Electret condenser

Directivity:

Wide-cardioid

Frequency response:

70 Hz to 12 kHz

Sensitivity (0 dB = 1 V/Pa, at 1 kHz):

-44 dB (6.3 mV)  $\pm 3$  dB

Output impedance (at 1 kHz):

800  $\Omega$   $\pm 30\%$  (unbalanced)

Dynamic range:

93 dB or more

Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

60 dB or more

Inherent noise:

34 dB SPL or less

Wind noise (w/wind screen, at 2 m/s):

63 dB SPL or less

Max. input sound pressure level:

127 dB SPL

Output connector:

SMC9-4P type

Cable length:

1.2 m (3.9 feet)

Normal operating voltage:

DC 5 V (supply range: DC 3 to 10 V)

Current drain:

Less than 0.32 mA

Dimensions (microphone head):

10.0 mm dia. x 152 mm

(13/32 inch dia. x 5/8 inch)

Mass:

46 g (17 oz)



Wired Microphones

ECM-310BMP Headset Microphone

Features

- Lightweight, headset-style microphone for sound reinforcement applications
- Wide-cardioid, electret condenser microphone provides crisp and clear sound while isolating desired sound from surrounding ambience
- Adjustable hinge and goose-neck
- 1.2 m (3.9 feet) cable terminating in a 3.5 mm dia., 3-pole mini plug for use with the WRT-805A/805B UHF Synthesized Transmitter



Supplied Accessories

Urethane wind screen (1)

Specifications

Capsule type:

Electret condenser

Directivity:

Wide-cardioid

Frequency response:

70 Hz to 12 kHz

Sensitivity (0 dB = 1 V/Pa, at 1 kHz):

-44 dB (6.3 mV)  $\pm$ 3 dB

Output impedance (at 1 kHz):

800  $\Omega$   $\pm$ 30% (unbalanced)

Dynamic range:

93 dB or more

Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

60 dB or more

Inherent noise:

34 dB SPL or less

Wind noise (w/wind screen, at 2 m/s):

63 dB SPL or less

Max. input sound pressure level:

127 dB SPL

Output connector:

3.5 mm dia., 3-pole mini plug

Cable length:

1.2 m (3.9 feet)

Normal operating voltage:

DC 5 V (supply range: DC 3 to 10 V)

Current drain:

Less than 0.32 mA

Dimensions (microphone head):

10.0 mm dia. x 152 mm

(13/32 inch dia. x 5/8 inch)

Mass:

46 g (17 oz)

0 dB SPL = 2E-5 Pa.

## Wired Microphones

### ECM-44BC Lavalier Microphone

#### Features

- Omni-directional, electret condenser microphone
- Superior sound quality ●SMC9-4P type connector for use with WRT-822A/822B/860A ●Microphone head: 8.5 mm dia. x 14.5 mm (11/32 inch dia. x 19/32 inch), 2g (0.07 oz) ●Microphone cable length: 1.2 m (3.9 feet)

#### Applicable Models

WRT-822A UHF Synthesized Wireless Transmitter (64U)  
 WRT-822A UHF Synthesized Wireless Transmitter (66U)  
 WRT-822A UHF Synthesized Wireless Transmitter (68U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6264U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6668U)  
 WRT-8B UHF Synthesized Transmitter (6264U)  
 WRT-8B UHF Synthesized Transmitter (6668U)

#### Supplied Accessories

Holder clip (single/horizontal type) (1)  
 Urethane wind screen (1)  
 Microphone case (1)

#### Optional Accessories

SAD-H44B Lavalier-Microphone Holder Clip  
 AD-R44B Urethane Windscreen

#### Specifications

##### Capsule type:

Electret condenser

##### Frequency response:

40 Hz to 15 kHz

##### Directivity:

Omni-directional

##### Sensitivity (0 dB = 1 V/Pa, at 1 kHz):

-40 dB (10 mV)

##### Dynamic range:

90 dB or more

##### Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

62 dB or more

##### Inherent noise:

32 dB SPL or less

##### Wind noise (with wind screen, at 2 m/s):

40 dB SPL or less

##### Induction noise from external magnetic field

##### (dB SPL/(1E-7) T):

5 dB SPL or less

##### Max. input sound pressure level:

122 dB SPL

##### Output connector:

SMC9-4P type

##### Cable length:

1.2 m (3.9 feet)

##### Normal operating voltage:

DC 3 V (supply range: DC 3 to 10 V)

##### Current drain:

0.3 mA or less

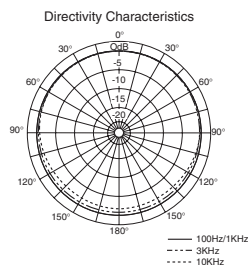
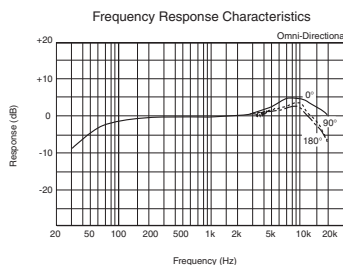
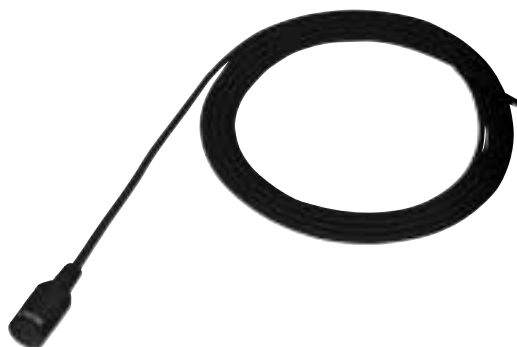
##### Dimensions (microphone head):

8.5 mm dia. x 14.5 mm  
 (11/32 inch dia. x 19/32 inch)

##### Mass (microphone head):

2 g (0.07 oz)

\*0 dB SPL = 2E-5 Pa.



## Wired Microphones

### ECM-44BMP Lavalier Microphone

#### Features

- Omni-directional, electret condenser microphone
- Superior sound quality ●3.5 mm dia., 3-pole mini plug for use with WRT-805A/805B ●Microphone head: 8.5 mm dia. x 14.5 mm (11/32 inch dia. x 19/32 inch), 2g (0.07 oz)
- Microphone cable length: 1.2 m (3.9 feet)

#### Supplied Accessories

Holder clip (single/horizontal type) (1)  
Urethane wind screen (1)  
Microphone case (1)

#### Optional Accessories

SAD-H44B Lavalier-Microphone Holder Clip  
AD-R44B Urethane Windscreen

#### Specifications

Capsule type:

Electret condenser

Frequency response:

40 Hz to 15 kHz

Directivity:

Omni-directional

Sensitivity (0 dB = 1 V/Pa, at 1 kHz):

-40 dB (10 mV)

Dynamic range:

90 dB or more

Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

62 dB or more

Inherent noise:

32 dB SPL or less

Wind noise (with wind screen, at 2 m/s):

40 dB SPL or less

Induction noise from external magnetic field

(dB SPL/(1E-7) T):

5 dB SPL or less

Max. input sound pressure level:

122 dB SPL

Output connector:

3.5 mm dia., 3-pole mini plug

Cable length:

1.2 m (3.9 feet)

Normal operating voltage:

DC 3 V (supply range: DC 3 to 10 V)

Current drain:

0.3 mA or less

Dimensions (microphone head):

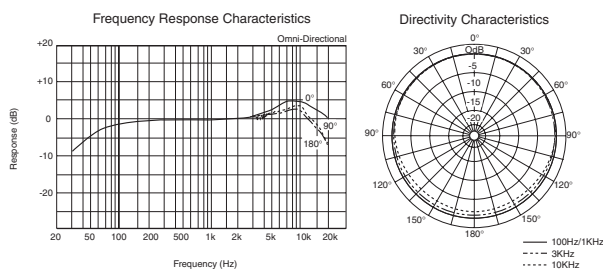
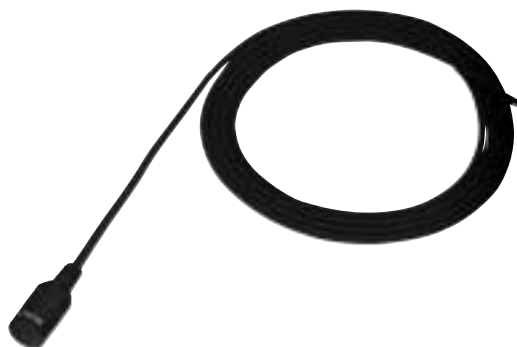
8.5 mm dia. x 14.5 mm

(11/32 inch dia. x 19/32 inch)

Mass (microphone head):

2 g (0.07 oz)

\*0 dB SPL = 2E-5 Pa.



## Wired Microphones

### ECM-44BPT Lavalier Microphone

#### Features

- Omni-directional, electret condenser microphone
- Superior sound quality
- Pig-tail connection (without battery unit or connector)
- Microphone head: 8.5 mm dia. x 14.5 mm (11/32 inch dia. x 19/32 inch), 2g (0.07 oz)
- Microphone cable length: 1.2 m (3.9 feet)

#### Supplied Accessories

Holder clip (single/horizontal type) (1)  
Urethane wind screen (1)  
Microphone case (1)

#### Optional Accessories

SAD-H44B Lavalier-Microphone Holder Clip  
AD-R44B Urethane Windscreen

#### Specifications

Capsule type:

Electret condenser

Frequency response:

40 Hz to 15 kHz

Directivity:

Omni-directional

Sensitivity (0 dB = 1 V/Pa, at 1 kHz):

-40 dB (10 mV)

Dynamic range:

90 dB or more

Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

62 dB or more

Inherent noise:

32 dB SPL or less

Wind noise (with wind screen, at 2 m/s):

40 dB SPL or less

Induction noise from external magnetic field

(dB SPL/(1E-7) T):

5 dB SPL or less

Max. input sound pressure level:

122 dB SPL

Cable length:

3.0 m (9.8 feet)

Normal operating voltage:

DC 3 V (supply range: DC 3 to 10 V)

Current drain:

0.3 mA or less

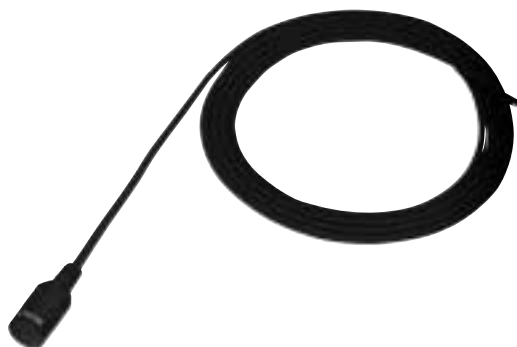
Dimensions (microphone head):

8.5 mm dia. x 14.5 mm

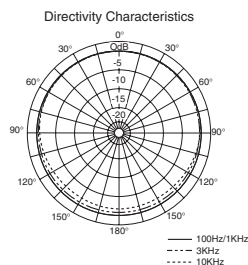
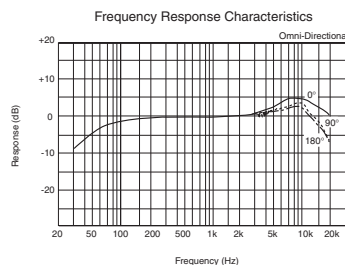
(11/32 inch dia. x 19/32 inch)

Mass (microphone head):

2 g (0.07 oz)



Wired Microphones



## Wired Microphones

### ECM-77BC Lavalier Microphone

#### Features

- High performance, ultra miniature microphone
- Omni-directional, electret condenser microphone
- Frequency response: 40 Hz to 20 kHz
- Microphone head: approx. 5.6 mm dia. x 12.5 mm (1/4 inch dia. x 1/2 inch), 1.5 g (0.04 oz)
- 1.2 m (3.9 feet) cable terminating in a SMC9-4P type connector for use with WRT-822A/822B/860A



#### Applicable Models

WRT-822A UHF Synthesized Wireless Transmitter (64U)  
 WRT-822A UHF Synthesized Wireless Transmitter (66U)  
 WRT-822A UHF Synthesized Wireless Transmitter (68U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6264U)  
 WRT-822B UHF Synthesized Wireless Transmitter (6668U)  
 WRT-8B UHF Synthesized Transmitter (6264U)  
 WRT-8B UHF Synthesized Transmitter (6668U)

#### Current drain:

0.4 mA or less

#### Dimensions:

##### Microphone head:

5.6 mm dia. x 12.5 mm  
 (1/4 inch dia. x 1/2 inch)

##### Mass (microphone head):

1.5 g (0.05 oz)

\*0 dB SPL = 2E-5 Pa.

#### Supplied Accessories

Holder clip (single/horizontal type) (1)  
 Holder clip (single/vertical type) (1)  
 Metal wind screen (1)  
 Microphone case (1)

#### Optional Accessories

AD-KIT77 Lavalier-Microphone Accessory Kit  
 SAD-H77B Lavalier-Microphone Holder Clip  
 SAD-W77B Lavalier-Microphone Holder Clip  
 SAD-V77B Lavalier-Microphone Holder Clip  
 AD-C77B Urethane Windscreen  
 AD-R77B Metal Windscreen  
 AD-R77S Metal Windscreen  
 AD-C77 Color Urethane Windscreen

#### Specifications

##### Capsule type:

Electret condenser

##### Directivity:

Omni-directional

##### Frequency response:

40 Hz to 20 kHz

##### Sensitivity (0 dB=1 V/Pa, at 1 kHz):

-39.0 dB (11.2 mV)

##### Dynamic range:

90 dB or more

##### Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

64 dB or more

##### Inherent noise:

30 dB SPL or less

##### Wind noise (with wind screen, at 2 m/s):

40 dB SPL or less

##### Induction noise from external magnetic field (dB SPL/(1E-7) T):

5 dB SPL or less

##### Max. input sound pressure level:

120 dB SPL

##### Output connector:

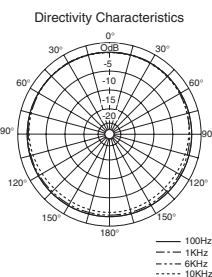
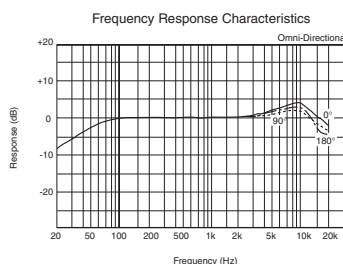
SMC9-4P type

##### Cable length:

1.2 m (3.9 feet)

##### Normal operating voltage:

DC 3 V (supply range: 3 to 10 V)



## Wired Microphones

### ECM-77BMP Lavalier Microphone

#### Features

- High performance, ultra miniature microphone
- Omni-directional, electret condenser microphone
- Frequency response: 40 Hz to 20 kHz
- Microphone head: approx. 5.6 mm dia. x 12.5 mm (1/4 inch dia. x 1/2 inch), 1.5 g (0.04 oz)
- 1.2 m (3.9 feet) cable terminating in a 3.5 mm dia., 3-pole mini plug for use with WRT-805A/805B



#### Supplied Accessories

- Holder clip (single/horizontal type) (1)
- Holder clip (single/vertical type) (1)
- Metal wind screen (1)
- Microphone case (1)

#### Optional Accessories

- AD-KIT77 Lavalier-Microphone Accessory Kit
- SAD-H77B Lavalier-Microphone Holder Clip
- SAD-W77B Lavalier-Microphone Holder Clip
- SAD-V77B Lavalier-Microphone Holder Clip
- AD-C77B Urethane Windscreen
- AD-R77B Metal Windscreen
- AD-R77S Metal Windscreen
- AD-C77 Color Urethane Windscreen

#### Specifications

##### Capsule type:

Electret condenser

##### Directivity:

Omn-directional

##### Frequency response:

40 Hz to 20 kHz

##### Sensitivity (0 dB=1 V/Pa, at 1 kHz):

-39.0 dB (11.2 mV)

##### Dynamic range:

90 dB or more

##### Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

64 dB or more

##### Inherent noise:

30 dB SPL or less

##### Wind noise (with wind screen, at 2 m/s):

40 dB SPL or less

##### Induction noise from external magnetic field

(dB SPL/(1E-7) T):

5 dB SPL or less

##### Max. input sound pressure level:

120 dB SPL

##### Output connector:

3.5 mm dia., 3-pole mini plug

##### Cable length:

1.2 m (3.9 feet)

##### Normal operating voltage:

DC 3 V (supply range: 3 to 10 V)

##### Current drain:

0.4 mA or less

##### Dimensions:

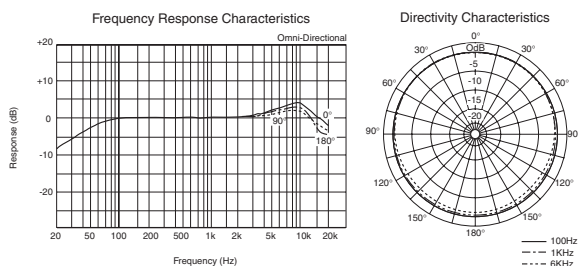
Microphone head:

5.6 mm dia. x 12.5 mm  
(1/4 inch dia. x 1/2 inch)

##### Mass (microphone head):

1.5 g (0.05 oz)

\*0 dB SPL = 2E-5 Pa.



## Wired Microphones

### ECM-77BPT Lavalier Microphone

#### Features

- High performance, ultra miniature microphone
- Omni-directional, electret condenser microphone
- Frequency response: 40 Hz to 20 kHz ●Pigtail connection, without battery unit or connector ●Microphone head: approx. 5.6 mm dia. x 12.5 mm (1/4 inch dia. x 1/2 inch), 1.5 g (0.04 oz) ●Mic cable length: 3.0 m (9.8 feet)



#### Supplied Accessories

- Holder clip (single/horizontal type) (1)
- Holder clip (single/vertical type) (1)
- Metal wind screen (1)
- Microphone case (1)

#### Optional Accessories

- AD-KIT77 Lavalier-Microphone Accessory Kit
- SAD-H77B Lavalier-Microphone Holder Clip
- SAD-W77B Lavalier-Microphone Holder Clip
- SAD-V77B Lavalier-Microphone Holder Clip
- AD-C77B Urethane Windscreen
- AD-R77B Metal Windscreen
- AD-R77S Metal Windscreen
- AD-C77 Color Urethane Windscreen

#### Specifications

##### Capsule type:

Electret condenser

##### Directivity:

Omni-directional

##### Frequency response:

40 Hz to 20 kHz

##### Sensitivity (0 dB=1 V/Pa, at 1 kHz):

-39.0 dB (11.2 mV)

##### Dynamic range:

90 dB or more

##### Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.):

64 dB or more

##### Inherent noise:

30 dB SPL or less

##### Wind noise (with wind screen, at 2 m/s):

40 dB SPL or less

##### Induction noise from external magnetic field

(dB SPL/(1E-7) T):

5 dB SPL or less

##### Max. input sound pressure level:

120 dB SPL

##### Cable length:

3.0 m (9.8 feet)

##### Normal operating voltage:

DC 3 V (supply range: 3 to 10 V)

##### Current drain:

0.4 mA or less

##### Dimensions:

##### Microphone head:

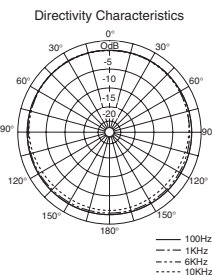
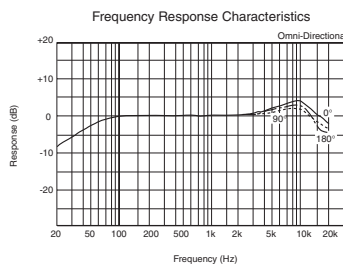
5.6 mm dia. x 12.5 mm

(1/4 inch dia. x 1/2 inch)

##### Mass (microphone head):

1.5 g (0.05 oz)

\*0 dB SPL = 2E-5 Pa.



## Wired Microphones

### ECM-88 Lavalier Microphone

#### Features

- Ultra miniature, omni-directional electret condenser microphone
- Designed for use in broadcasting, theater, and field production applications
- Dual -diaphragm mechanism contributes to its high sensitivity and low inherent noise characteristics
- Water-resistant architecture
- Flat-and-wide frequency response: 20 Hz to 20 kHz
- Microphone head: 3.5 mm x 3.5 mm x 16.8 mm (5/32 x 5/32 x 11-16 inch)
- 2.5 m (8.2 feet) cable with a Sony 4-pin connector (SMC9-4P) for connection to the optional DC-78 power supply unit or the WRT-8B/822A/822B bodypack transmitter



ECM-88 with supplied accessories

#### Supplied Accessories

Carrying case (1)  
 Microphone holder (double-pin type) (1)  
 Microphone holder (tie-clip type) (1)  
 Urethane windscreen (1)

#### Optional Accessories

AD-KIT88 Lavalier-Microphone Accessory Kit  
 AD-C88 Color Urethane Windscreen  
 AD-R88B Urethane Windscreen  
 SAD-88B Lavalier-Microphone Holder Clip  
 SAD-P88 Lavalier-Microphone Holders  
 SAD-W88B Lavalier-Microphone Holder Adaptor  
 DC-78 Power Supply Unit

#### Specifications

##### Capsule type:

Electret condenser

##### Directivity:

Omni-directional

##### Frequency response:

20 Hz to 20 kHz

##### Sensitivity (at 1 kHz):

-52 dB\*  $\pm 2$  dB (when used in combination with the DC-78)  
 -38 dB\* (12.6 mV)

##### Output impedance (at 1 kHz):

100  $\Omega$   $\pm 20\%$  (when used in combination with the DC-78)  
 2.5 k $\Omega$   $\pm 30\%$

##### Dynamic range:

99 dB or more

##### Signal-to-noise ratio:

68 dB or more (A-weighted, 1 kHz, 1Pa.)

##### Inherent noise:

26 dB SPL\*\* or less (A-weighted, 1 kHz, 1Pa.)

##### Wind noise:

45 dB SPL\*\* or less (when using the supplied windscreen)

##### Induction noise from external magnetic field:

5 dB SPL\*\* or less (when used in combination with the DC-78)

##### Maximum input sound pressure level:

125 dB SPL\*\*

##### Cable length:

2.5 m (8.2 feet)

##### Output connector:

Sony SMC9-4P

##### Power requirements:

DC 1.1 to 10.0 V

##### Dimensions (microphone capsule):

3.5 x 3.5 x 16.8 (h) mm  
 (5/32 x 5/32 x 11/16 inch)

##### Mass:

32 g (including microphone cable)

\*10 dB = 1V/Pa., at 1 kHz \*\*0 dB SPL = 20 $\mu$  Pa.

Wired Microphones

ECM-88B Lavalier Microphone

The ECM-88B is an extremely miniature, omni-directional electret condenser microphone ideal for quality-critical applications in broadcasting, theater, and field productions.

Features

- Dual -diaphragm mechanism contributes to its high sensitivity and low inherent noise characteristics
- Water-resistant architecture
- Flat-and-wide frequency response: 20 Hz to 20 kHz
- Ultra-compact microphone capsule: 3.5 x 3.5 x 16.8 mm (5/32 x 5/32 x 11/16 inches)
- Supplied DC-78 DC Power Supply Unit enables two-way powering - internal AA-size (LR6) alkaline-battery operation or DC (12 to 48 V) operation
- Mic cable length: 2.5 m (8.2 feet)



Supplied Accessories

- Single/horizontal type tie clip (1)
- Single/vertical type tie clip (1)
- Double/horizontal type tie clip (1)
- Urethane windscreen (1)
- DC-78 (1)
- Microphone case (1)
- Ferrite clamp (1)
- Operating instructions (1)

Optional Accessories

- AD-KIT88B Lavalier-Microphone Accessory Kit
- SAD-H88B Lavalier-Microphone Holder Clip
- SAD-V88B Lavalier-Microphone Holder Clip
- SAD-W88BL Lavalier-Microphone Holder Clip
- SAD-S88B Lavalier-Microphone Holder Clip
- AD-C88 Color Urethane Windscreen
- AD-R88B Urethane Windscreen

Output connector:

XLR-3-12C (when used with the supplied DC-78)

Power requirements:

DC 1.1 to 10.0 V

Dimensions (microphone capsule):

3.5 x 3.5 x 16.8 (h) mm  
(5/32 x 5/32 x 11/16 inch)  
Clip attachment area: 3.9 mm (5/32 inch) diameter

Mass:

32 g (including microphone cable)  
162 g (5.7 oz) with the supplied DC-78

(\*1) 10 dB = 1V/Pa., at 1 kHz (\*2) 0 dB SPL = 20μ Pa.

Specifications

Capsule type:

Electret condenser

Directivity:

Omni-directional

Frequency response:

20 Hz to 20 kHz

Sensitivity (at 1 kHz):

-52 dB (\*1) ±2 dB (when used in combination with the DC-78)  
-38 dB (\*1) (12.6 mV)

Output impedance (at 1 kHz):

100 Ω ±20% (when used in combination with the DC-78)  
2.5 kΩ ±30%

Dynamic range:

99 dB or more

Signal-to-noise ratio:

68 dB or more (A-weighted, 1 kHz, 1Pa.)

Inherent noise:

26 dB SPL (\*2) or less (A-weighted, 1 kHz, 1Pa.)

Wind noise:

45 dB SPL (\*2) or less (when using the supplied windscreen)

Induction noise from external magnetic field:

5 dB SPL (\*2) or less (when used in combination with the DC-78)

Maximum input sound pressure level:

125 dB SPL (\*2)

Cable length:

2.5 m (8.2 feet)

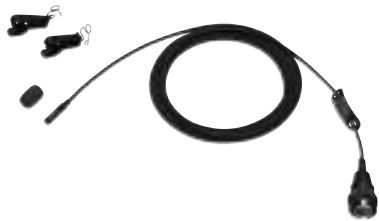
Wired Microphones

ECM-88BC Lavalier Microphone

The ECM-88BC is an extremely miniature, omni-directional electret condenser microphone ideal for quality-critical applications in broadcasting, theater, and field productions.

Features

- Dual -diaphragm mechanism contributes to its high sensitivity and low inherent noise characteristics
- Water-resistant architecture
- Flat-and-wide frequency response: 20 Hz to 20 kHz
- Ultra-compact microphone capsule: 3.5 x 3.5 x 16.8 mm (5/32 x 5/32 x 11/16 inches)
- 1.2 m (3.9 feet) cable with a Sony 4-pin connector (SMC9-4P) for use with the WRT-8B/822A/822B wireless bodypack transmitter



ECM-88BC with supplied accessories

Applicable Models

- WRT-822A UHF Synthesized Wireless Transmitter (64U)
- WRT-822A UHF Synthesized Wireless Transmitter (66U)
- WRT-822A UHF Synthesized Wireless Transmitter (68U)
- WRT-822B UHF Synthesized Wireless Transmitter (6264U)
- WRT-822B UHF Synthesized Wireless Transmitter (6668U)
- WRT-8B UHF Synthesized Transmitter (6264U)
- WRT-8B UHF Synthesized Transmitter (6668U)

Supplied Accessories

- Single/horizontal type tie clip (1)
- Single/vertical type tie clip (1)
- Urethane windscreen (1)
- Ferrite clamp (1)
- Operating instructions (1)

Optional Accessories

- DC-78 Power Supply Unit
- AD-KIT88B Lavalier-Microphone Accessory Kit
- SAD-H88B Lavalier-Microphone Holder Clip
- SAD-V88B Lavalier-Microphone Holder Clip
- SAD-W88BL Lavalier-Microphone Holder Clip
- SAD-S88B Lavalier-Microphone Holder Clip
- AD-C88 Color Urethane Windscreen
- AD-R88B Urethane Windscreen

Specifications

- Capsule type:
  - Electret condenser
- Directivity:
  - Omni-directional
- Frequency response:
  - 20 Hz to 20 kHz
- Sensitivity (at 1 kHz):
  - 52 dB (\*1)  $\pm 2$  dB (when used in combination with the DC-78)
  - 38 dB (\*1) (12.6 mV)
- Output impedance (at 1 kHz):
  - 100  $\Omega$   $\pm 20\%$  (when used in combination with the DC-78)
  - 2.5 k $\Omega$   $\pm 30\%$
- Dynamic range:
  - 99 dB or more
- Signal-to-noise ratio:
  - 68 dB or more (A-weighted, 1 kHz, 1Pa.)

- Inherent noise:
  - 26 dB SPL (\*2) or less (A-weighted, 1 kHz, 1Pa.)
- Wind noise:
  - 45 dB SPL (\*2) or less (when using the supplied windscreen)
- Induction noise from external magnetic field:
  - 5 dB SPL (\*2) or less (when used in combination with the DC-78)
- Maximum input sound pressure level:
  - 125 dB SPL (\*2)
- Cable length:
  - 1.2 m (3.9 feet)
- Output connector:
  - Sony SMC9-4P
- Power requirements:
  - DC 1.1 to 10.0 V
- Dimensions (microphone capsule):
  - 3.5 x 3.5 x 16.8 (h) mm
  - (5/32 x 5/32 x 11/16 inch)
  - Clip attachment area: 3.9 mm (5/32 inch) diameter
- Mass:
  - 22 g (including microphone cable)

(\*1) 10 dB = 1V/Pa., at 1 kHz (\*2) 0 dB SPL = 20 $\mu$ Pa.

Wired Microphones

ECM-88BPT Lavalier Microphone

The ECM-88BPT is an extremely miniature, omni-directional electret condenser microphone ideal for quality-critical applications in broadcasting, theater, and field productions.

Features

- Dual -diaphragm mechanism contributes to its high sensitivity and low inherent noise characteristics
- Water-resistant architecture
- Flat-and-wide frequency response: 20 Hz to 20 kHz
- Ultra-compact microphone capsule: 3.5 x 3.5 x 16.8 mm (5/32 x 5/32 x 11/16 inches)
- 2.5 m (8.2 feet) without a connector (pigtail), enabling users to choose the connectors according to their transmitter



Supplied Accessories

- Single/horizontal type tie clip (1)
- Single/vertical type tie clip (1)
- Urethane windscreen (1)
- Ferrite clamp (1)
- Operating instructions (1)

Dimensions (microphone capsule):

- 3.5 x 3.5 x 16.8 (h) mm
- (5/32 x 5/32 x 11/16 inch)
- Clip attachment area: 3.9 mm (5/32 inch) diameter

Mass:

- 20 g (including microphone cable)

Optional Accessories

- DC-78 Power Supply Unit
- AD-KIT88B Lavalier-Microphone Accessory Kit
- SAD-H88B Lavalier-Microphone Holder Clip
- SAD-V88B Lavalier-Microphone Holder Clip
- SAD-W88BL Lavalier-Microphone Holder Clip
- SAD-S88B Lavalier-Microphone Holder Clip
- AD-C88 Color Urethane Windscreen
- AD-R88B Urethane Windscreen

(\*1) 10 dB = 1V/Pa., at 1 kHz (\*2) 0 dB SPL = 20μ Pa.

Specifications

Capsule type:

- Electret condenser

Directivity:

- Omni-directional

Frequency response:

- 20 Hz to 20 kHz

Sensitivity (at 1 kHz):

- 52 dB (\*1) ±2 dB (when used in combination with the DC-78)
- 38 dB (\*1) (12.6 mV)

Output impedance (at 1 kHz):

- 100 Ω ±20% (when used in combination with the DC-78)
- 2.5 kΩ ±30%

Dynamic range:

- 99 dB or more

Signal-to-noise ratio:

- 68 dB or more (A-weighted, 1 kHz, 1Pa.)

Inherent noise:

- 26 dB SPL (\*2) or less (A-weighted, 1 kHz, 1Pa.)

Wind noise:

- 45 dB SPL (\*2) or less (when using the supplied windscreen)

Induction noise from external magnetic field:

- 5 dB SPL (\*2) or less (when used in combination with the DC-78)

Maximum input sound pressure level:

- 125 dB SPL (\*2)

Cable length:

- 2.5 m (8.2 feet)

Output connector:

- No connector

Power requirements:

- DC 1.1 to 10.0 V

## Wired Microphones

### ECM-88FPT Lavalier Microphone

#### Features

●Ultra miniature, omni-directional electret condenser microphone ●Designed for use in broadcasting, theater, and field production applications ●Dual -diaphragm mechanism contributes to its high sensitivity and low inherent noise characteristics ●Water-resistant architecture ●Flat-and-wide frequency response: 20 Hz to 20 kHz ●Beige color ●Microphone head: 3.5 mm x 3.5 mm x 16.8 mm (5/32 x 5/32 x 11-16 inch) ●2.5 m (8.2 feet) cable without a connector



#### Optional Accessories

AD-KIT88 Lavalier-Microphone Accessory Kit  
AD-C88 Color Urethane Windscreen  
AD-R88B Urethane Windscreen  
SAD-88B Lavalier-Microphone Holder Clip  
SAD-P88 Lavalier-Microphone Holders  
SAD-W88B Lavalier-Microphone Holder Adaptor

#### Specifications

Capsule type:  
Electret condenser  
Directivity:  
Omni-directional  
Frequency response:  
20 Hz to 20 kHz  
Sensitivity (at 1 kHz):  
-38 dB\* (12.6 mV)

Output impedance (at 1 kHz):

2.5 k $\Omega$   $\pm$ 30%

Dynamic range:

99 dB or more

Signal-to-noise ratio:

68 dB or more (A-weighted, 1 kHz, 1Pa.)

Inherent noise:

26 dB SPL\*\* or less (A-weighted, 1 kHz, 1Pa.)

Wind noise:

45 dB SPL\*\* or less (when using the supplied windscreen)

Induction noise from external magnetic field:

5 dB SPL\*\* or less (when used in combination with the DC-78)

Maximum input sound pressure level:

125 dB SPL\*\*

Cable length:

2.5 m (8.2 feet)

Output connector:

No connector (pigtail)

Power requirements:

DC 1.1 to 10.0 V

Dimensions (microphone capsule):

3.5 x 3.5 x 16.8 (h) mm  
(5/32 x 5/32 x 11/16 inch)

Mass:

32 g (including microphone cable)

\*10 dB = 1V/Pa., at 1 kHz \*\*0 dB SPL = 20 $\mu$  Pa.

### ECM-88PT Lavalier Microphone

#### Features

●Ultra miniature, omni-directional electret condenser microphone ●Designed for use in broadcasting, theater, and field production applications ●Dual -diaphragm mechanism contributes to its high sensitivity and low inherent noise characteristics ●Water-resistant architecture ●Flat-and-wide frequency response: 20 Hz to 20 kHz ●Microphone head: 3.5 mm x 3.5 mm x 16.8 mm (5/32 x 5/32 x 11-16 inch) ●2.5 m (8.2 feet) cable without a connector (pig tail)

#### Supplied Accessories

Microphone holder (double-pin type) (1)  
Microphone holder (tie-clip type) (1)  
Urethane windscreen (1)  
Operating instructions (1)

#### Optional Accessories

AD-KIT88 Lavalier-Microphone Accessory Kit  
SAD-88B Lavalier-Microphone Holder Clip  
SAD-P88 Lavalier-Microphone Holders  
SAD-W88B Lavalier-Microphone Holder Adaptor  
AD-C88 Color Urethane Windscreen  
AD-R88B Urethane Windscreen

#### Specifications

Capsule type:  
Electret condenser  
Directivity:  
Omni-directional

Frequency response:

20 Hz to 20 kHz

Sensitivity (at 1 kHz):

-38 dB\* (12.6 mV)

Output impedance (at 1 kHz):

2.5 k $\Omega$   $\pm$ 30%

Dynamic range:

99 dB or more

Signal-to-noise ratio:

68 dB or more (A-weighted, 1 kHz, 1Pa.)

Inherent noise:

26 dB SPL\*\* or less (A-weighted, 1 kHz, 1Pa.)

Wind noise:

45 dB SPL\*\* or less (when using the supplied windscreen)

Induction noise from external magnetic field:

5 dB SPL\*\* or less (when used in combination with the DC-78)

Maximum input sound pressure level:

125 dB SPL\*\*

Cable length:

2.5 m (8.2 feet)

Output connector:

No connector (pig tail)

Power requirements:

DC 1.1 to 10.0 V

Dimensions (microphone capsule):

3.5 x 3.5 x 16.8 (h) mm  
(5/32 x 5/32 x 11/16 inch)

Mass:

20 g (including microphone cable)

\*10 dB = 1V/Pa., at 1 kHz \*\* 0 dB SPL = 20 $\mu$  Pa.

## Wired Microphones

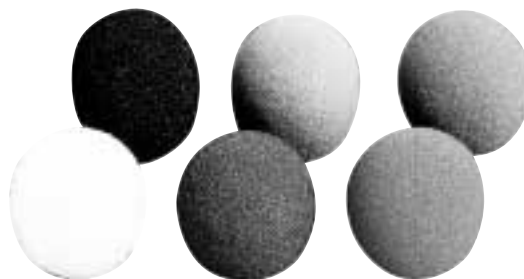
### AD-C77 Color Urethane Windscreen

#### Features

- Designed for ECM-77 Series lavalier microphones
- Two sets of the six colors (red, yellow, green, blue, gray, and black) are included.

#### Applicable Models

ECM-77BC Lavalier Microphone  
ECM-77BMP Lavalier Microphone  
ECM-77BPT Lavalier Microphone



### AD-C77B Urethane Windscreen

#### Features

- Designed for ECM-77 Series lavalier microphones
- Black color
- 12 pieces are included.

#### Applicable Models

ECM-77BC Lavalier Microphone  
ECM-77BMP Lavalier Microphone  
ECM-77BPT Lavalier Microphone



### AD-C88 Color Urethane Windscreen

#### Features

- Designed for ECM-88 Series Lavalier microphones
- Two sets of the six colors (red, yellow, green, blue, gray, and black) are included.

#### Applicable Models

ECM-88 Lavalier Microphone  
ECM-88B Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-88BPT Lavalier Microphone  
ECM-88FPT Lavalier Microphone  
ECM-88PT Lavalier Microphone



### AD-KIT77 Lavalier-Microphone Accessory Kit

#### Features

- Designed for ECM-77 Series Lavalier microphones
- Includes three types of microphone holders (horizontal/single type, vertical/single type, and horizontal/dual type) and six urethane windscreens (red, yellow, green, blue, gray, and black)

#### Applicable Models

ECM-77BC Lavalier Microphone  
ECM-77BMP Lavalier Microphone  
ECM-77BPT Lavalier Microphone



## Wired Microphones

### AD-KIT88 Lavalier-Microphone Accessory Kit

#### Features

- Designed for ECM-88 Series Lavalier microphones
- Includes two types of microphone holders (double-pin and tie-clip), a holder adaptor for dual-microphone operation, and six urethane windscreens (red, yellow, green, blue, gray, and black)

#### Applicable Models

ECM-88 Lavalier Microphone  
ECM-88FPT Lavalier Microphone  
ECM-88PT Lavalier Microphone

### AD-KIT88B Lavalier-Microphone Accessory Kit

The AD-KIT88B is a lavalier microphone accessory kit for the ECM-88 Series.

#### Features

- Includes four types of microphone clips (single/horizontal, single/vertical, double/horizontal, and safety-pin type tie clip) and six urethane windscreens (red, yellow, green, blue, gray, and black)

#### Applicable Models

ECM-88B Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-88BPT Lavalier Microphone



### AD-R44B Urethane Windscreen

#### Features

- Designed for ECM-44 Series lavalier microphones
- Black color ●12 pieces are included.

#### Applicable Models

ECM-44BC Lavalier Microphone  
ECM-44BMP Lavalier Microphone  
ECM-44BPT Lavalier Microphone



### AD-R55B Metal Windscreen

#### Features

- Designed for ECM-55 Series lavalier microphones
- Black color ●Six pieces are included.



## Wired Microphones

### AD-R66B Urethane Windscreen

#### Features

- Designed for ECM-66 Series lavalier microphones
- Black color ●12 pieces are included.



### AD-R77B Metal Windscreen

#### Features

- Designed for ECM-77 Series lavalier microphones
- Black color ●Six pieces are included.

#### Applicable Models

ECM-77BC Lavalier Microphone  
ECM-77BMP Lavalier Microphone  
ECM-77BPT Lavalier Microphone



### AD-R88B Urethane Windscreen

#### Features

- Designed for ECM-88 Series lavalier microphones
- Black color ●12 pieces are included.

#### Applicable Models

ECM-88 Lavalier Microphone  
ECM-88B Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-88BPT Lavalier Microphone  
ECM-88FPT Lavalier Microphone  
ECM-88PT Lavalier Microphone



## Wired Microphones

### DC-78 Power Supply Unit

#### Features

- Designed for use with Sony lavalier microphones equipped with a Sony 4-pin (SMC9-4P) connector
- Two-way powering: battery operation (using an AA-size (LR6) alkaline battery) or external DC operation (12 to 48 V)
- Supplied with an SMC9-4S input connector and an XLR 3-pin output connector

#### Applicable Models

ECM-88 Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-88BPT Lavalier Microphone

#### Specifications

##### Power requirements:

- Internal battery: DC 1.5 V (AA-size (LR6) alkaline battery)
- External battery: DC 12 to 48 V

##### Battery life:

- Approx. 6000 h

##### Input connector:

- Sony 4-pin (SMC9-4S)

##### Output connector:

- XLR-3-12C type

##### Dimensions:

- 20.0 dia. x 144.0 (h) mm (13/16 x 5 3/4 inches)

##### Mass:

- Approx. 130 g (4.59 oz) including batteries



### SAD-88B Lavalier-Microphone Holder Clip

#### Features

- Single, tie-clip type microphone holder for ECM-88 Series lavalier microphones
- Black color
- Six pieces are included.

#### Applicable Models

ECM-88 Lavalier Microphone  
ECM-88FPT Lavalier Microphone  
ECM-88PT Lavalier Microphone



### SAD-H44B Lavalier-Microphone Holder Clip

#### Features

- Single/horizontal holder clip for the ECM-44 Series lavalier microphones
- Black color
- 10 pieces are included.

#### Applicable Models

ECM-44BC Lavalier Microphone  
ECM-44BMP Lavalier Microphone  
ECM-44BPT Lavalier Microphone



## Wired Microphones

### SAD-H55B Lavalier-Microphone Holder Clip

#### Features

●Single/horizontal holder clip for the ECM-55 Series and ECM-66 Series lavalier microphones ●Black color ●10 pieces are included.



### SAD-H77B Lavalier-Microphone Holder Clip

#### Features

●Single/horizontal holder clip for the ECM-77 Series lavalier microphones ●Black color ●10 pieces are included.

#### Applicable Models

ECM-77BC Lavalier Microphone  
ECM-77BMP Lavalier Microphone  
ECM-77BPT Lavalier Microphone



### SAD-H88B Lavalier-Microphone Holder Clip

The SAD-H88B is a horizontal type lavalier microphone holder clip for the ECM-88 Series.

#### Features

●Single/horizontal holder clip for the ECM-88 Series lavalier microphones ●Black color ●Six pieces are included

#### Applicable Models

ECM-88B Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-88BPT Lavalier Microphone



### SAD-P88 Lavalier-Microphone Holders

#### Features

●Double-pin type microphone holder for ECM-88 Series lavalier microphones ●Black color ●Six pieces are included.

#### Applicable Models

ECM-88 Lavalier Microphone  
ECM-88FPT Lavalier Microphone  
ECM-88PT Lavalier Microphone



## Wired Microphones

### SAD-S77 Lavalier-Microphone Holder Clip

#### Features

- Safety pin-type holder clip for the ECM-77 Series lavalier microphones
- Silver type
- Six pieces are included.



### SAD-S88B Lavalier-Microphone Holder Clip

The SAD-S88B is a safety-pin type lavalier microphone holder clip for the ECM-88 Series.

#### Features

- Safety-pin type holder clip for the ECM-88 Series lavalier microphones
- Black color
- Six pieces are included

#### Applicable Models

ECM-88B Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-88BPT Lavalier Microphone



### SAD-V77B Lavalier-Microphone Holder Clip

#### Features

- Single/vertical holder clip for the ECM-77 Series lavalier microphones
- Black color
- 10 pieces are included.

#### Applicable Models

ECM-77BC Lavalier Microphone  
ECM-77BMP Lavalier Microphone  
ECM-77BPT Lavalier Microphone



### SAD-V88B Lavalier-Microphone Holder Clip

The SAD-V88B is a vertical type lavalier microphone holder clip for the ECM-88 Series.

#### Features

- Single/vertical holder clip for the ECM-88 Series lavalier microphones
- Black color
- Six pieces are included

#### Applicable Models

ECM-88B Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-88BPT Lavalier Microphone



## Wired Microphones

### SAD-W77B Lavalier-Microphone Holder Clip

#### Features

- Double/vertical holder clip for the ECM-77 Series lavalier microphones
- Black color
- Six pieces are included.

#### Applicable Models

ECM-77BC Lavalier Microphone  
ECM-77BMP Lavalier Microphone  
ECM-77BPT Lavalier Microphone



### SAD-W88B Lavalier-Microphone Holder Adaptor

#### Features

- Microphone holder adaptor for dual-microphone operation
- Used in combination with SAD-P88 or SAD-88B microphone holder
- Six pieces are included.

#### Applicable Models

ECM-88 Lavalier Microphone  
ECM-88FPT Lavalier Microphone  
ECM-88PT Lavalier Microphone



### SAD-W88BL Lavalier-Microphone Holder Clip

The SAD-W88BL is a double/horizontal type lavalier microphone holder clip for the ECM-88 Series.

#### Features

- Double/horizontal holder clip for the ECM-88 Series lavalier microphones
- Black color
- Six pieces are included

#### Applicable Models

ECM-88B Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-88BPT Lavalier Microphone



## Wired Microphones

### F-112 Dynamic Microphone

The Sony F-112 is a high-quality dynamic microphone, specifically designed for field production and newsgathering applications

#### Features

●Superior sound quality ●Flat-and-wide frequency response ●Robust and sophisticated design



#### Supplied Accessories

Operating instructions (1)

#### Mass

180 g (6 oz)

#### Optional Accessories

UWP-C3 UHF Synthesized Wireless

Microphone Package

UWP-C3 UHF Synthesized Wireless

Microphone Package

(\*1) 0 dB=1 V/Pa., at 1 kHz

#### Specifications

Capsule type

Dynamic

Directivity

Omni-directional

Frequency response

60 Hz to 17 kHz

Sensitivity (at 1 kHz)

-54 dB (\*1)  $\pm 3$  dB

Output impedance (at 1 kHz)

400  $\Omega$   $\pm 20\%$

Dimensions

20/38 dia. x 190 mm (13/16 dia. (handle),

1 1/2 dia. (head) x 7 1/2 inches)

### F-720 Dynamic Microphone (E)

#### Features

●For multi-purpose applications ●Convenient TALK switch for turning on and off the microphone ●Vibration proof capsule suspension ●XLR-3-12C type connector ●Frequency response: 50 Hz to 13 kHz ●Dimensions: 37.6 dia. x 160 mm (1 1/2 dia. x 6 3/8 inches) ●Mass: approx. 260 g (9.2 oz)



#### Supplied Accessories

Microphone holder (1)

Stand adaptor (NS5/8) (1)

Stand adaptor (W3/8) (1)

#### Optional Accessories

A-12 Table Stand

A-25 Table Stand

A-25N Table Stand

CRS-3P Cradle Suspension

#### Specifications

Capsule type:

Dynamic

Frequency response:

50 Hz to 13 kHz

Directivity:

Uni-directional

Effective output level at 1 kHz (0 dBm = 1 mW/1 Pa.):

-60.0 dBm

Sensitivity (0 dB = 1 V/1 Pa., at 1 kHz):

-57.0 dB  $\pm 3.0$  dB

Output impedance at 1 kHz (balanced):

500  $\Omega$   $\pm 20\%$

Induction noise from external magnetic field

(dB SPL/(1E-7) T):

10 dB SPL or less

Wind noise:

55 dB SPL or less

Microphone connector:

XLR-3-12C type

Available receptacle:

XLR-3-11C type

Stand screw/mic holder screw:

PF1/2-inch thread

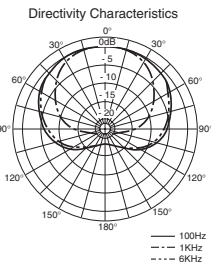
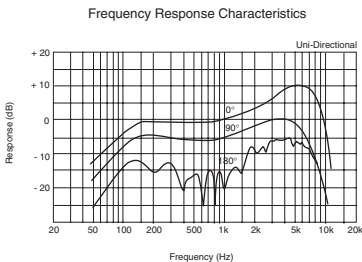
Dimensions (diameter x length):

37.6 x 160 mm (1 1/2 x 6 3/8 inches)

Mass:

260 g (9.2 oz)

\* 0 dB SPL = 2E-5 Pa.



## Wired Microphones

### F-740 Dynamic Microphone

#### Features

●For vocal and instrumental pick-up ●Rugged capsules in a resilient body structure ●Special AlNiCo Magnet ●High quality CCAW (Copper Clad Aluminium Wire) voice coil ●XLR-3-12C type connector ●Frequency response: 50 Hz to 18 kHz ●Dimensions: 51 dia. x 165 mm (2 1/8 dia. x 6 1/2 inches) ●Mass: approx. 290 g (10.2 oz)



#### Supplied Accessories

Microphone holder (1)  
Stand adaptor (NS5/8) (1)  
Stand adaptor (W3/8) (1)

#### Optional Accessories

SAD-700 Microphone Holder  
A-12 Table Stand  
A-25 Table Stand  
A-25N Table Stand  
CRS-3P Cradle Suspension

#### Specifications

Capsule type:

Dynamic

Frequency response:

50 Hz to 18 kHz

Directivity:

Uni-directional

Effective output level at 1 kHz (0 dBm = 1 mW/1 Pa.):

-56.0 dBm

Sensitivity (0 dB = 1 V/1 Pa., at 1 kHz):

-54.0 dB  $\pm 2.0$  dB

Output impedance at 1 kHz (balanced):

400  $\Omega \pm 20\%$

Induction noise from external magnetic field

(dB SPL/(1E-7) T):

5 dB SPL or less

Wind noise:

50 dB SPL or less

Microphone connector:

XLR-3-12C type

Available receptacle:

XLR-3-11C type

Stand screw/mic holder screw:

PF1/2-inch thread

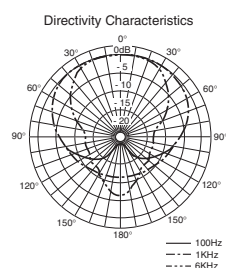
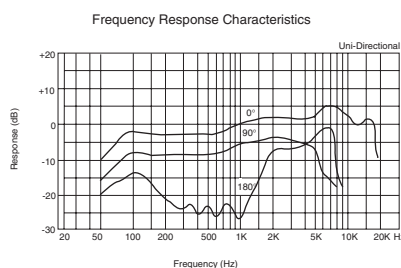
Dimensions (diameter x length):

51 x 165 mm (2 1/8 x 6 1/2 inches)

Mass:

290 g (10.2 oz)

\*0 dB SPL = 2E-5 Pa.



## Wired Microphones

### F-780 Dynamic Microphone

#### Features

- Designed specifically for critical vocal reproduction in music recording and live performance
- Rugged capsules in a resilient body structure
- Special AlNiCo Magnet
- High quality edgewise winding CCAW (Copper Clad Aluminium Wire) voice coil
- XLR-3-12C type connector
- Frequency response: 50 Hz to 18 kHz
- Dimensions: 51 dia. x 165 mm (2 1/8 dia. x 6 1/2 inches)
- Mass: approx. 290 g (10.2 oz)



#### Supplied Accessories

Microphone holder (1)  
Stand adaptor (NS5/8) (1)  
Stand adaptor (W3/8) (1)

#### Optional Accessories

SAD-700 Microphone Holder  
A-12 Table Stand  
A-25 Table Stand  
A-25N Table Stand  
CRS-3P Cradle Suspension

#### Specifications

Capsule type:

Dynamic

Frequency response:

50 Hz to 18 kHz

Directivity:

Uni-directional

Effective output level at 1 kHz (0 dBm = 1 mW/1 Pa.):

-55.0 dBm

Sensitivity (0 dB = 1 V/1 Pa., at 1 kHz):

-53.0 dB  $\pm$ 2.0 dB

Output impedance at 1 kHz (balanced):

400 $\Omega$   $\pm$ 20%

Induction noise from external magnetic field

(dB SPL/(1E-7) T):

5 dB SPL or less

Wind noise:

50 dB SPL or less

Microphone connector:

XLR-3-12C type

Available receptacle:

XLR-3-11C type

Stand screw/mic holder screw:

PF1/2-inch thread

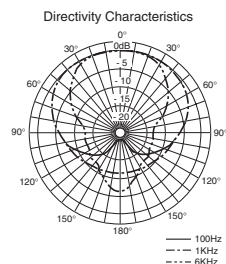
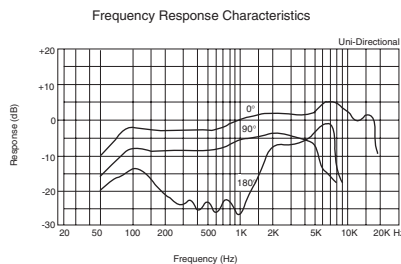
Dimensions (diameter x length):

51 x 165 mm (11/8 x 6 1/2 inches)

Mass:

290 g (10.2 oz)

\*0 dB SPL = 2E-5 Pa.



## Wired Microphones

### C-38B Condenser Microphone

#### Features

- Selectable directivity: uni-directional or omni-directional
- 140 dB SPL, suitable for recording wind instruments
- 2-way powering: internal 6F-22 size battery (Approx. 250 hours of continuous operation) or external power supply (DC 24 to 48 V)
- Vibration resistant construction
- Excellent shielding against external magnetic fields



#### Supplied Accessories

Carrying case (1)  
Stand adaptor (NS5/8) (1)  
Stand adaptor (W3/8) (1)  
Screwdriver (1)

#### Optional Accessories

AC-148F AC Power Supply (220 to 240 V)  
A-12 Table Stand

#### Specifications

Capsule type:  
Condenser  
Frequency response:  
30 Hz to 18 kHz  
Directivity:  
Uni-directional/Omi-directional (selectable)  
Effective output level at 1 kHz (0 dBm = 1 mW/1 Pa.):  
-47.8 dBm  
Sensitivity (0 dB = 1 V/1 Pa, at 1 kHz):  
-48.0 dB  $\pm$ 2.0 dB  
Output impedance at 1 kHz (balanced):  
250  $\Omega$   $\pm$ 20%  
Dynamic Range:  
116 dB or more  
Signal-to-noise Ratio (a weighted, 1 kHz, 1 Pa.):  
70 dB or more

#### Inherent noise:

(Uni) 24 dB SPL or less  
(Omni) 26 dB SPL or less

Induction noise from ext. magnetic field (dB SPL/(1E-7) T):  
5 dB SPL or less

#### Wind noise:

44 dB SPL or less

Max. input sound pressure level:

140 dB SPL

Mic attenuator:

-8 dB

#### Tone control:

Low-cut: M, M1, V1, V2  
High-cut: 1

Microphone connector:

XLR-3-12C type

Microphone cable:

6 m (19.7 feet)

Available receptacle:

XLR-3-11C type

#### Power supply:

Battery (S-006P (U)) or external power  
(AC-148F or equivalent)

(S-006P (U)) battery life: approx. 200 h

#### Standard operating voltage:

Battery: 9 V

External Power: DC 24 to 48 V

#### Current drain:

Battery: 2 mA or less

External power: 5 mA or less

#### Dimensions:

78 dia. x 214 x 46 mm

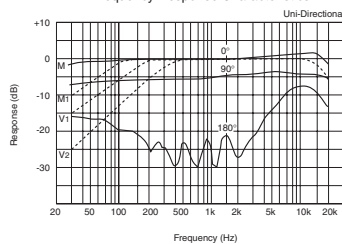
3 1/8 dia. x 8 1/2 x 1 13/16 inches

#### Mass (without battery):

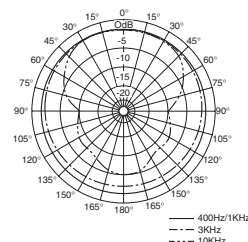
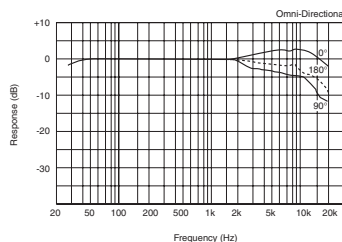
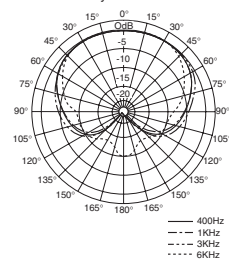
Approx. 650 g (1 lb 7 oz)

\*0 dB SPL = 2E-5 Pa.

Frequency Response Characteristics



Directivity Characteristics



## Wired Microphones

### C-48 Condenser Microphone (E)

#### Features

- Selectable directivity: uni-directional, omni-directional or bi-directional
- 2-way powering: internal 6F-22 size battery (Approx. 50 hours of continuous operation) or external power supply (DC 48 V)
- Suitable for vocal and instrumental recording
- 10 dB attenuation switch



#### Supplied Accessories

- Carrying case (1)
- Stand adaptor (NS5/8) (1)
- Stand adaptor (W3/8) (1)

#### Optional Accessories

- AC-148F AC Power Supply (220 to 240 V)
- A-12 Table Stand

#### Specifications

- Capsule type: Condenser
- Frequency response: 30 Hz to 16 kHz
- Directivity: Uni-directional/Omni-directional/Bi-directional (selectable)

Effective output level at 1 kHz (0 dBm = 1 mW/1 Pa.):

- (Uni) -38.8 dBm
- (Omni) -39.3 dBm
- (Bi) -38.3 dBm

Sensitivity (0 dB = 1 V/1 Pa, at 1 kHz):

- (Uni) -41.0 dB  $\pm$  2.0 dB
- (Omni) -41.5 dB  $\pm$  2.0 dB
- (Bi) -40.5 dB  $\pm$  2.0 dB

Output impedance at 1 kHz (balanced):

- 150  $\Omega$   $\pm$  20%

Dynamic range:

- 106 dB or more

Signal-to-noise ratio (a weighted, 1 kHz, 1 Pa.):

- 72 dB or more

Inherent noise:

- 22 dB SPL or less

Induction noise from ext. magnetic field (dB SPL/(1E-7) T):

- 0 dB SPL or less

Wind noise:

- 47 dB SPL or less

Max. input sound pressure level:

- 128 dB SPL

Mic attenuator:

- 10 dB

Tone Control (Low-cut):

- M, V

Microphone connector:

- XLR-3-12C type

Available receptacle:

- XLR-3-11C type

Power supply:

- Battery (S-006P (U)) or external power supply (AC-148F or equivalent)
- (S-006P (U) battery life: approx. 50 h)

Standard operating Voltage:

- Battery: 9 V
- External power: DC 48 V

Current drain:

- Battery: 5 mA or less
- External power: 1 mA or less

Dimensions:

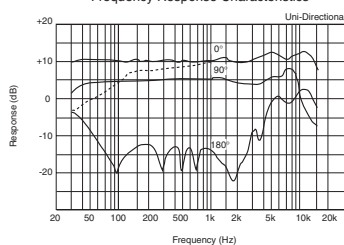
- 54 dia. x 229 x 40 mm
- 2 1/4 dia. x 9 1/8 x 1 5/8 inches

Mass (without battery):

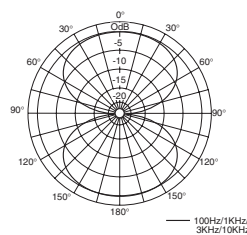
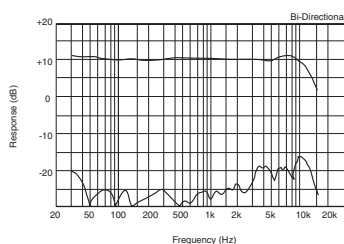
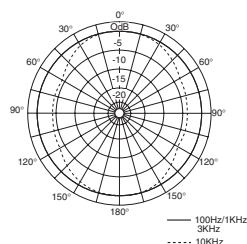
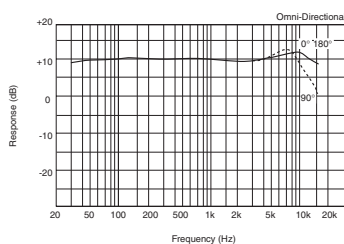
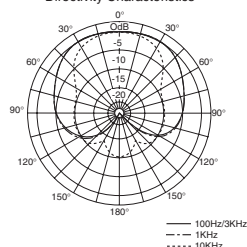
- Approx. 550 g (1 lb 4 oz)

\*0 dB SPL = 2E-5 Pa.

Frequency Response Characteristics



Directivity Characteristics



## Wired Microphones

### C-800G Vacuum Tube Condenser Microphone

#### Features

- Designed for the highest possible sound reproduction quality
- Suitable for vocal recording in studios and film post-production houses
- High sensitivity of -32 dB/Pa.
- Low noise and low distortion due to built-in cooling system
- Selectable directivity: uni-directional or omni-directional
- Large diaphragm capsule

#### Supplied Accessories

- Wind screen (1)
- Cradle suspension (1)
- Stand screw adaptor (PF1/2 to NS5/8) (1)
- Stand screw adaptor (PF1/2 to W3/8) (1)
- Mic cable (8m, JIS CNR-01 type, 7-pin) (1)
- Carrying case (1)
- G sticker (1)
- Frequency response chart (2)

#### Optional Accessories

- AC-MC800G AC Power Supply Unit (100/120/220/230-240 V)

#### Specifications

Capsule type:

Condenser

Frequency response:

20 Hz to 18 kHz

Directivity:

Uni-directional/Omni-directional (selectable)

Effective output level at 1 kHz (0 dBm = 1 mW/1 Pa.):

(Uni) -28.0 dBm

(Omni) -31.0 dBm

Sensitivity (0 dB=1 V/1 Pa, at 1 kHz):

(Uni) -32.0 dB  $\pm 2.0$  dB

(Omni) -35.0 dB  $\pm 2.0$  dB

Output impedance at 1 kHz (balanced):

100 $\Omega$   $\pm 20\%$

Dynamic range:

113 dB or more

Signal-to-noise ratio (a weighted, 1 kHz, 1 Pa.):

(Uni) 76 dB or more

(Omni) 73 dB or more

Inherent noise:

(Uni) 18 dB SPL or less

Induction noise from external magnetic field

(dB SPL/(1E-7) T):

0 dB SPL or less

Wind noise:

50 dB SPL or less

Max. input sound pressure level:

(Uni) 131 dB SPL

(Omni) 134 dB SPL

Power supply:

AC-MC800G (Optional)

Microphone connector:

CNR-01 type (7-pin)

Dimensions:

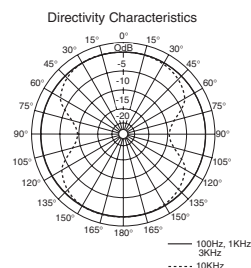
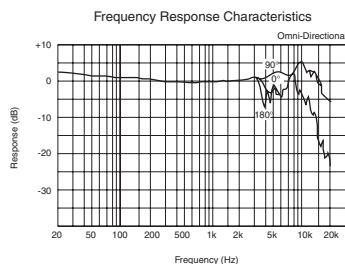
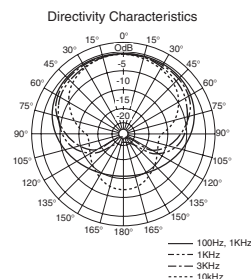
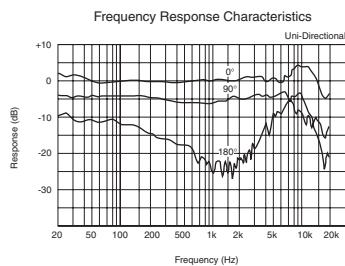
57 dia. x 191 x 237 mm

2 1/4 dia. x 7 3/8 x 9 3/8 inches

Mass (approx.):

900 g (2 lb)

\*0 dB SPL = 2E-5 Pa.



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## Wireless Microphones

# WRR-802A UHF Synthesized Diversity Tuner (64U)

### Features

- Single-channel space diversity tuner, half 19-inch rack width and 1U height
- Operates over a 12 MHz frequency band within the range of 770 MHz to 782 MHz (TV channels 64 and 65)
- Output level control on front panel
- Use of SAW filters for exceptional rejection of undesired signals while maintaining the best signal integrity of the desired signals
- AF, RF, and battery alarm indication by both LED and LCD to double check operating condition (channel indication by LCD only)
- Supplied front-mounted passive antennas
- Two types of output connectors; TRS phone balanced connector (6.3 mm dia., -20 dBm for LINE), and XLR connector (-58 dBm for MIC or -20 dBm for LINE)



### Supplied Accessories

AC power adaptor (1)

Antenna (2)

### Specifications

Receiving channel:

1 channel

Receiving frequency:

770 MHz to 782 MHz

Oscillator:

1st: PLL synthesizer, 2nd: Crystal oscillator

De-emphasis:

50  $\mu$ s

Reference deviation:

$\pm 5$  kHz at 1 kHz modulation

(Max. deviation:  $\pm 40$  kHz deviation at 1 kHz modulation)

Selectivity:

60 dB or more at  $\pm 250$  kHz

Spurious rejection ratio:

70 dB or more

Frequency range:

70 Hz to 18 kHz (typical)

Signal-to-noise ratio:

60 dB or more at 60 dB $\mu$  RF input at reference deviation, A-weighted

Harmonic distortion:

Less than 1.0%

RF muting level:

30 dB $\mu$

Audio output level:

-20 dBm/-58 dBm at reference deviation

Audio output connector:

XLR-3-32 (x 1, balanced) and TRS phone (x 1, 6.3 mm (1/4 inch) dia., balanced)

Antenna connector:

BNC-R type (2)

Operating voltage:

DC 9 V

Current consumption:

600 mA or less

Dimensions (W x H x D):

218 x 44 x 210 mm (8 5/8 x 1 3/4 x 8 3/8 inches)

Mass:

1.6 kg (3 lb 8 oz)

Wireless Microphones

WRR-802A UHF Synthesized Diversity Tuner (66U)

Features

●Single-channel space diversity tuner, half 19-inch rack width and 1U height ●Operates over a 12 MHz frequency band within the range of 782 MHz to 794 MHz (TV channels 66 and 67) ●Output level control on front panel ●Use of SAW filters for exceptional rejection of undesired signals while maintaining the best signal integrity of the desired signals ●AF, RF, and transmitter's low-battery alarm indication by both LED and LCD to double check operating condition ●Supplied front-mounted passive antennas ●Two types of output connectors: TRS phone balanced connector (6.3 mm dia., -20 dBm for LINE), and XLR connector (-58 dBm for MIC or -20 dBm for LINE)



Supplied Accessories

AC power adaptor (1)  
Antenna (2)

Specifications

Receiving channel:  
1 channel  
Receiving frequency:  
792 MHz to 784 MHz  
Oscillator:  
1st: PLL synthesizer, 2nd: Crystal oscillator  
De-emphasis:  
50  $\mu$ s

Reference deviation:  
 $\pm 5$  kHz at 1 kHz modulation  
(Max. deviation:  $\pm 40$  kHz deviation at 1 kHz modulation)  
Selectivity:  
60 dB or more at  $\pm 250$  kHz  
Spurious rejection ratio:  
70 dB or more  
Frequency range:  
70 Hz to 18 kHz (typical)  
Signal-to-noise ratio:  
60 dB or more at 60 dB $\mu$  RF input at reference deviation, A-weighted  
RF muting level:  
30 dB $\mu$

Audio output level:  
-20 dBm/-58 dBm at reference deviation  
Audio output connector:  
XLR-3-32 (x 1), balanced  
TRS phone (x 1, 6.3 mm (1/4 inch) dia.), balanced  
Antenna connector:  
BNC-R type (2)  
Operating voltage:  
DC 9 V  
Current consumption:  
600 mA or less  
Dimensions (W x H x D):  
218 x 44 x 210 mm (8 5/8 x 1 3/4 x 8 3/8 inches)  
Mass:  
1.6 kg (3 lb 8 oz)

## Wireless Microphones

# WRR-855A UHF Synthesized Diversity Tuner (64U)

### Features

- Slot-in type space diversity tuner designed for use with Sony professional camcorders
- Weatherproof structure
- Compact design and lightweight design; 280 g (9.9 oz)
- A D-sub 15-pin connector for audio output to a Sony professional camcorder and for receiving its power supply from camcorders
- Operates in the 770 MHz to 782 MHz UHF frequency band (TV channels 64 and 65)
- LED indicators for AF/RF conditions
- LCD indicator for operating channel
- Switchable RF muting; ON (10 dB $\mu$ ) or OFF
- Use of the BTA-801 (optional portable tuner mount adaptor) allows the WRR-855A to be mounted on Sony professional camcorders and powered from the camcorder via a DC cable supplied with BTA-801
- Use of the CA-WR855 (optional camera adaptor) allows the WRR-855A to be mounted on Sony DVCAM camcorders and powered from the camcorder.



### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DSR-400K DVCAM Camcorder  
 DSR-400L DVCAM Camcorder  
 DSR-450WSL DVCAM Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-970 Digital Betacam Camcorder  
 HDW-730S HDCAM Camcorder  
 HDW-750 HDCAM Camcorder  
 HDW-750P HDCAM Camcorder  
 MSW-970 MPEG IMX camcorder  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 WLL-CA55 Wireless Camera Transmitter (UC)

### Supplied Accessories

Antenna (2)

### Optional Accessories

CA-WR855 Camera Adaptor  
 BTA-801 Portable Tuner Mount Adaptor

### Specifications

Receiving channel number:  
1 channel

Receiving frequency:  
770 MHz to 782 MHz

Oscillator:  
1st: PLL synthesizer, 2nd: Crystal oscillator

De-emphasis:  
50  $\mu$ s

### Reference deviation:

$\pm 5$  kHz deviation at 1 kHz modulation  
 (Max. deviation:  $\pm 40$  kHz modulation)

### Selectivity:

60 dB or more at  $\pm 250$  kHz

### Spurious rejection:

80 dB or more

### Frequency range:

40 to 18 kHz (typical)

### Signal-to-noise ratio:

60 dB or more at 60 dB $\mu$  RF input at reference deviation, A-weighted

### RF muting level:

10 dB $\mu$  or OFF selectable

### Audio output level:

-40 dBm at reference deviation

### Audio output connector:

D-sub 15-pin (1), balanced

### Antenna connector:

BNC-R type (2), 50  $\Omega$  (nominal) impedance

### Operating voltage:

DC 7 V

### Current consumption:

200 mA or less at external DC 7 V

### Dimensions (W x H x D):

88.0 x 119.0 x 31.3 mm  
 (3 1/2 x 4 3/4 x 1 1/4 inches)

### Mass:

280 g (9.9 oz)

## Wireless Microphones

# WRR-855A UHF Synthesized Diversity Tuner (66U)

### Features

- Slot-in type space diversity tuner designed for use with Sony professional camcorders
- Weatherproof structure
- A D-sub 15-pin connector for audio output to a Sony professional camcorder and for receiving its power supply from camcorders
- Operates over a 12 MHz frequency band within the range of 782 MHz to 794 MHz (TV channels 66 and 67)
- LED indicators for AF/RF conditions
- LCD indicator for operating channel
- Switchable RF muting; ON (10 dB $\mu$ ) or OFF
- Use of the optional BTA-801 allows the WRR-855A to be mounted on Sony professional camcorders and powered from the camcorder via a DC cable supplied with the BTA-801
- Use of optional the CA-WR855 allows the WRR-855A to be mounted on Sony DVCAM camcorders with direct audio/power connection interfaces



### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DSR-400K DVCAM Camcorder  
 DSR-400L DVCAM Camcorder  
 DSR-450WSL DVCAM Camcorder  
 MSW-970 MPEG IMX camcorder  
 WLL-CA55 Wireless Camera Transmitter (UC)

### Supplied Accessories

Antenna (2)

### Optional Accessories

CA-WR855 Camera Adaptor  
 BTA-801 Portable Tuner Mount Adaptor

### Specifications

Receiving channel number:

1 channel

Receiving frequency:

782 MHz to 794 MHz

Oscillator:

1st: PLL synthesizer, 2nd: Crystal oscillator

De-emphasis:

50  $\mu$ s

Reference deviation:

$\pm 5$  kHz deviation at 1 kHz modulation  
 (Max. deviation:  $\pm 40$  kHz modulation)

Selectivity:

60 dB or more at  $\pm 250$  kHz

Spurious rejection:

80 dB or more

Frequency range:

40 to 18 kHz (typical)

Signal-to-noise ratio:

60 dB or more at 60 dB $\mu$  RF input at  
 reference deviation, A-weighted

RF muting level:

10 dB $\mu$  or OFF selectable

Audio output level:

-40 dBm at reference deviation

Audio output connector:

D-sub 15-pin (1), balanced

Antenna connector:

BNC-R type (2), 50  $\Omega$  (nominal)  
 impedance

Operating voltage:

DC 7 V

Current consumption:

200 mA or less at external DC 7 V

Dimensions (W x H x D):

88.0 x 119.0 x 31.3 mm  
 (3 1/2 x 4 3/4 x 1 1/4 inches)

Mass:

280 g (9.9 oz)

## Wireless Microphones

# WRR-855A UHF Synthesized Diversity Tuner (68U)

### Features

- Slot-in type space diversity tuner designed for use with Sony professional camcorders
- Weatherproof structure
- Compact design and lightweight design; 280 g (9.9 oz)
- A D-sub 15-pin connector for audio output to a Sony professional camcorder and for receiving its power supply from camcorders
- Operates in the 794 MHz to 806 MHz UHF frequency band (TV channels 68 and 69)
- LED indicators for AF/RF conditions
- LCD indicator for operating channel
- Switchable RF muting; ON (10 dB $\mu$ ) or OFF
- Use of the BTA-801 (optional portable tuner mount adaptor) allows the WRR-855A to be mounted on Sony professional camcorders and powered from the camcorder via a DC cable supplied with BTA-801
- Use of the CA-WR855 (optional camera adaptor) allows the WRR-855A to be mounted on Sony DVCAM camcorders and powered from the camcorder.



### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DSR-400K DVCAM Camcorder  
 DSR-400L DVCAM Camcorder  
 DSR-450WSL DVCAM Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-970 Digital Betacam Camcorder  
 HDW-730S HDCAM Camcorder  
 HDW-750 HDCAM Camcorder  
 HDW-750P HDCAM Camcorder  
 MSW-970 MPEG IMX camcorder  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 WLL-CA55 Wireless Camera Transmitter (UC)

### Supplied Accessories

Antenna (2)

### Optional Accessories

CA-WR855 Camera Adaptor  
 BTA-801 Portable Tuner Mount Adaptor

### Specifications

Receiving channel number:  
1 channel

Receiving frequency:  
794 MHz to 806 MHz

Oscillator:  
1st: PLL synthesizer, 2nd: Crystal oscillator

De-emphasis:  
50  $\mu$ s

### Reference deviation:

$\pm 5$  kHz deviation at 1 kHz modulation  
 (Max. deviation:  $\pm 40$  kHz modulation)

### Selectivity:

60 dB or more at  $\pm 250$  kHz

### Spurious rejection:

80 dB or more

### Frequency range:

40 to 18 kHz (typical)

### Signal-to-noise ratio:

60 dB or more at 60 dB $\mu$  RF input at reference deviation, A-weighted

### RF muting level:

10 dB $\mu$  or OFF selectable

### Audio output level:

-40 dBm at reference deviation

### Audio output connector:

D-sub 15-pin (1), balanced

### Antenna connector:

BNC-R type (2), 50  $\Omega$  (nominal) impedance

### Operating voltage:

DC 7 V

### Current consumption:

200 mA or less at external DC 7 V

### Dimensions (W x H x D):

88.0 x 119.0 x 31.3 mm  
 (3 1/2 x 4 3/4 x 1 1/4 inches)

### Mass:

280 g (9.9 oz)

## Wireless Microphones

# WRR-855B UHF Synthesized Diversity Tuner (6264U)

### Features

- Slot-in type space diversity tuner designed for use with Sony professional camcorders
- Weatherproof structure
- Compact design and lightweight design; 280 g (9.9 oz)
- A D-sub 15-pin connector for audio output to a Sony professional camcorder and for receiving its power supply from camcorders
- Operates in the 758 MHz to 782 MHz UHF frequency band (TV channels 62 to 65)
- LED indicators for AF/RF conditions
- LCD indicator for operating channel
- Switchable RF muting; ON (10 dBμ) or OFF
- Use of the BTA-801 (optional portable tuner mount adaptor) allows the WRR-855B to be mounted on Sony professional camcorders and powered from the camcorder via a DC cable supplied with BTA-801
- Use of the CA-WR855 (optional camera adaptor) allows the WRR-855B to be mounted on Sony DVCAM camcorders and powered from the camcorder.



### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-970 Digital Betacam Camcorder  
 HDW-730S HDCAM Camcorder  
 HDW-750 HDCAM Camcorder  
 HDW-750P HDCAM Camcorder  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 WLL-CA55 Wireless Camera Transmitter (UC)

### Supplied Accessories

Antenna (2)

### Optional Accessories

BTA-801 Portable Tuner Mount Adaptor  
 CA-WR855 Camera Adaptor

### Specifications

Receiving channel number:  
1 channel

Receiving frequency:  
758 MHz to 782 MHz

Oscillator:  
1st: PLL synthesizer, 2nd: Crystal oscillator

De-emphasis:  
50 μs

Reference deviation:  
± 5 kHz deviation at 1 kHz modulation  
(Max. deviation: ±40 kHz modulation)

Selectivity:  
60 dB or more at ±250 kHz

Spurious rejection:  
80 dB or more

Frequency range:  
40 to 18 kHz (typical)

Signal-to-noise ratio:  
60 dB or more at 60 dBμ RF input at reference deviation, A-weighted

RF muting level:  
10 dBμ or OFF selectable

Audio output level:  
-40 dBm at reference deviation

Audio output connector:  
D-sub 15-pin (1), balanced

Antenna connector:  
BNC-R type (2), 50 Ω (nominal) impedance

Operating voltage:  
DC 7 V

Current consumption:  
200 mA or less at external DC 7 V

Dimensions (W x H x D):  
88.0 x 119.0 x 31.3 mm  
(3 1/2 x 4 3/4 x 1 1/4 inches)

Mass:  
280 g (9.9 oz)

## Wireless Microphones

# WRR-855B UHF Synthesized Diversity Tuner (6668U)

### Features

- Slot-in type space diversity tuner designed for use with Sony professional camcorders
- Weatherproof structure
- A D-sub 15-pin connector for audio output to a Sony professional camcorder and for receiving its power supply from camcorders
- Operates over a 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 and 69)
- LED indicators for AF/RF conditions
- LCD indicator for operating channel
- Switchable RF muting; ON (10 dB $\mu$ ) or OFF
- Use of the optional BTA-801 allows the WRR-855B to be mounted on Sony professional camcorders and powered from the camcorder via a DC cable supplied with the BTA-801
- Use of optional the CA-WR855 allows the WRR-855B to be mounted on Sony DVCAM camcorders with direct audio/power connection interfaces



### Applicable Models

DNW-7 Betacam SX Camcorder  
 DNW-90WS Betacam SX Camcorder  
 DNW-9WS Betacam SX Camcorder  
 DVW-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DVW-970 Digital Betacam Camcorder  
 HDW-730S HDCAM Camcorder  
 HDW-750 HDCAM Camcorder  
 HDW-750P HDCAM Camcorder  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)  
 WLL-CA55 Wireless Camera Transmitter (UC)

### Supplied Accessories

Antenna (2)

### Optional Accessories

BTA-801 Portable Tuner Mount Adaptor  
 CA-WR855 Camera Adaptor

### Specifications

Receiving channel number:  
 1 channel  
 Receiving frequency:  
 782 MHz to 806 MHz  
 Oscillator:  
 1st: PLL synthesizer, 2nd: Crystal oscillator  
 De-emphasis:  
 50  $\mu$ s  
 Reference deviation:  
 $\pm 5$  kHz deviation at 1 kHz modulation  
 (Max. deviation:  $\pm 40$  kHz modulation)  
 Selectivity:  
 60 dB or more at  $\pm 250$  kHz

Spurious rejection:  
 80 dB or more  
 Frequency range:  
 40 to 18 kHz (typical)  
 Signal-to-noise ratio:  
 60 dB or more at 60 dB $\mu$  RF input at reference deviation, A-weighted  
 RF muting level:  
 10 dB $\mu$  or OFF selectable  
 Audio output level:  
 -40 dBm at reference deviation  
 Audio output connector:  
 D-sub 15-pin (1), balanced  
 Antenna connector:  
 BNC-R type (2), 50  $\Omega$  (nominal) impedance  
 Operating voltage:  
 DC 7 V  
 Current consumption:  
 200 mA or less at external DC 7 V  
 Dimensions (W x H x D):  
 88.0 x 119.0 x 31.3 mm  
 (3 1/2 x 4 3/4 x 1 1/4 inches)  
 Mass:  
 280 g (9.9 oz)

## Wireless Microphones

# WRR-861B UHF Synthesized Diversity Tuner (U6264)

### Features

- Operates over a 24 MHz frequency band within the range of 758 MHz to 782 MHz (TV channels 62 to 65)
- Eight hours of continuous operation with four AA-size (LR6) alkaline batteries
- Selectable RF squelch: 5 dB $\mu$ , 10 dB $\mu$ , 15 dB $\mu$  or OFF
- A space diversity reception system is employed to eliminate signal dropout and provide stable reception
- LED indicators for RF input status and transmitter battery alarm
- LCD screen for operating channel/frequency, AF output level, RF input level, receiver battery status and accumulated operating time
- Easily mounts on Sony professional camcorders with the supplied attachment kit and case (\*)
- Capable of operating on external power from Sony camcorders via the supplied DC cable
- A mini jack for monitoring the output sound with headphones. A monitor volume control is also provided.
- Rugged, diecast magnesium construction

(\*) A-8278-057-A mounting bracket (service part) may also be required.



### Applicable Models

CA-TX50 Camera Adaptor  
 DVW-709WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)

### Supplied Accessories

Output cable (1)  
 DC cable (1)  
 Attachment case (1)  
 Camera attachment kit (1)  
 Antenna (2)

### Specifications

Receiving channel:  
 1  
 Receiving frequencies:  
 758 MHz to 782 MHz  
 Type of reception:  
 Space diversity  
 Local oscillators:  
 1st: PLL synthesizer, 2nd: Crystal oscillator  
 System dynamic range:  
 96 dB or more (101 dB typical)

### Reference deviation:

$\pm 5$  kHz deviation at 1 kHz modulation  
 (Max. deviation:  $\pm 40$  kHz deviation at 1 kHz modulation)

### Signal-to-noise ratio:

60 dB or more (65 dB typical) at 60 dB $\mu$  RF input at reference deviation, A-weighted

### Selectivity:

60 dB or more at  $\pm 250$  kHz detuned

### RF squelch level:

5 dB $\mu$ , 10 dB $\mu$ , 15 dB $\mu$  or OFF

### De-emphasis:

50  $\mu$ s

### Frequency response:

40 Hz to 18 kHz (typical)

### Audio output connector:

SMC9-4S (Sony 4-pin, x 1), balanced

### Audio output level:

-58 dBm at reference deviation

### Antenna connector:

BNC-R (x 2), 50  $\Omega$  (nominal) impedance

### Monitor output:

3.5 mm dia. mini jack (x 1, 5 mW)

### Battery life:

Approx. 8 hours with Sony AA-size (LR6) alkaline batteries at 25 °C (77 °F)

### Power consumption:

Batteries: approx. 140 mA at DC 6 V  
 External: approx. 85 mA at DC 12 V

### Dimensions (W x H x D):

89.0 x 120.0 x 29.5 mm  
 (3 5/8 x 4 3/4 x 1 3/16 inches)

### Mass:

Approx. 290 g (10.2 oz) excluding batteries

## Wireless Microphones

# WRR-861B UHF Synthesized Diversity Tuner (U6668)

### Features

- Operates over a 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69)
- Eight hours of continuous operation with four AA-size (LR6) alkaline batteries
- Selectable RF squelch: 5 dB $\mu$ , 10 dB $\mu$ , 15 dB $\mu$  or OFF
- A space diversity reception system is employed to eliminate signal dropout and provide stable reception
- LED indicators for RF input status and transmitter battery alarm
- LCD screen for operating channel/frequency, AF output level, RF input level, receiver battery status and accumulated operating time
- Easily mounts on Sony professional camcorders with the supplied attachment kit and case (\*)
- Capable of operating on external power from Sony camcorders via the supplied DC cable
- A mini jack for monitoring the output sound with headphones. A monitor volume control is also provided.
- Rugged, diecast magnesium construction

(\*) A-8278-057-A mounting bracket (service part) may also be required.



### Applicable Models

CA-TX50 Camera Adaptor  
 DVW-709WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DVW-790WS Digital Betacam 16:9/4:3  
 Switchable Camcorder  
 DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color  
 Camera  
 DXC-D50WSL 3-chip CCD Portable Color  
 Camera  
 PDW-510 XDCAM Camcorder (DVCAM  
 Recording)  
 PDW-530 XDCAM Camcorder (MPEG  
 IMX/DVCAM Recording)

### Supplied Accessories

Output cable (1)  
 DC cable (1)  
 Attachment case (1)  
 Camera attachment kit (1)  
 Antenna (2)

### Specifications

Receiving channel:  
 1  
 Receiving frequencies:  
 782 MHz to 806 MHz  
 Type of reception:  
 Space diversity  
 Local oscillators:  
 1st: PLL synthesizer, 2nd: Crystal oscillator  
 System dynamic range:  
 96 dB or more (101 dB typical)

### Reference deviation:

$\pm 5$  kHz deviation at 1 kHz modulation  
 (Max. deviation:  $\pm 40$  kHz deviation at 1 kHz  
 modulation)  
 Signal-to-noise ratio:  
 60 dB or more (65 dB typical) at 60 dB $\mu$  RF  
 input at reference deviation, A-weighted  
 Selectivity:  
 60 dB or more at  $\pm 250$  kHz detuned  
 RF squelch level:  
 5 dB $\mu$ , 10 dB $\mu$ , 15 dB $\mu$  or OFF  
 De-emphasis:  
 50  $\mu$ s  
 Frequency response:  
 40 Hz to 18 kHz (typical)  
 Audio output connector:  
 SMC9-4S (Sony 4-pin, x 1), balanced  
 Audio output level:  
 -58 dBm at reference deviation  
 Antenna connector:  
 BNC-R (x 2), 50  $\Omega$  (nominal) impedance  
 Monitor output:  
 3.5 mm dia. mini jack (x 1, 5 mW)  
 Battery life:  
 Approx. 8 hours with Sony AA-size (LR6)  
 alkaline batteries at 25 °C (77 °F)  
 Power consumption:  
 Batteries: approx. 140 mA at DC 6 V  
 External: approx. 85 mA at DC 12 V  
 Dimensions (W x H x D):  
 89.0 x 120.0 x 29.5 mm  
 (3 5/8 x 4 3/4 x 1 3/16 inches)  
 Mass:  
 Approx. 290 g (10.2 oz) excluding batteries

## Wireless Microphones

# WRR-862B UHF Synthesized Dual Diversity Tuner (6264U)

### Features

- Receives two independent RF signals on two separate channels
- Operates over a 24 MHz frequency band within the range of 758 MHz to 782 MHz (TV channels 62 to 65)
- A space diversity system is employed on both channels to eliminate signal dropout and provide stable reception
- Compact and lightweight body; 400 g (14.1 oz) including batteries
- Easily mounts on Sony professional camcorders with the supplied attachment kit and case (\*)
- Two SMC9-4S (Sony 4-pin) audio output connectors on the top panel
- Rugged, diecast magnesium frame
- LED indicators for each channel to indicate RF input level (green/red indication), diversity reception status and transmitter battery alarm
- LCD screen for each channel to indicate operating channel/frequency, AF output level, RF input level, receiver battery status and accumulated battery operating time
- Five hours of continuous operation with four AA-size (LR6) alkaline batteries
- Capable of operating on external power from Sony camcorders via the supplied DC cable
- Selectable RF squelch threshold: 5 dB $\mu$ , 10 dB $\mu$ , 15 dB $\mu$  and OFF
- A stereo mini jack for monitoring the output sound (switchable: Tuner 1/2/mixed) with headphones (A monitor volume control is also included.)

(\*) A-8278-057-A mounting bracket (service part) may also be required.



### Applicable Models

CA-TX50 Camera Adaptor  
 DWV-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DWV-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DWV-970 Digital Betacam Camcorder  
 DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 HDW-730S HDCAM Camcorder  
 HDW-750 HDCAM Camcorder  
 HDW-750P HDCAM Camcorder  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)

### Supplied Accessories

Attachment case (1)  
 Mounting plate (1)  
 DC cable (1)  
 Output cable (2)  
 Antenna (2)

### Specifications

Receiving channel number:  
 2 channels  
 Receiving frequencies:  
 2 frequencies within 758 MHz to 782 MHz  
 Local oscillators:  
 1st: PLL synthesizer, 2nd: Crystal oscillator  
 De-emphasis:  
 50  $\mu$ s  
 System dynamic range:  
 96 dB or more (101 dB typical)

### Reference deviation:

$\pm 5$  kHz deviation at 1 kHz modulation  
 (Max. deviation:  $\pm 40$  kHz deviation at 1 kHz modulation)

### Selectivity:

60 dB or more at  $\pm 250$  kHz

### Spurious rejection:

70 dB or more

### Frequency response:

40 Hz to 18 kHz (typical)

### Signal-to-noise ratio:

60 dB or more (65 dB typical) at 60 dB $\mu$  RF input at reference deviation, A-weighted

### RF squelch level:

5 dB $\mu$ , 10 dB $\mu$ , 15 dB $\mu$  or OFF

### Audio output level:

-58 dBm at reference deviation

### Audio output connector:

SMC9-4S (Sony 4-pin, x 2), balanced

### Antenna connector:

BNC-R (x 2), 50  $\Omega$  (nominal) impedance

### Monitor output:

3.5 mm dia. mini jack (x 1, 5 mW), Tuner 1/2/mixed selectable

### Operating voltage:

Batteries: DC 6 V (four AA-size (LR6) alkaline batteries)  
 External: DC 12 V

### Battery life:

Approx. 5 hours with Sony AA-size (LR6) alkaline batteries at 25 °C (77 °F)

### Power consumption:

Batteries: approx. 230 mA at DC 6 V  
 External: approx. 135 mA at DC 12 V

### Dimensions (W x H x D):

89.0 x 120.0 x 29.5 mm  
 (3 5/8 x 4 3/4 x 1 3/16 inches)

### Mass:

Approx. 400 g (14.1 oz) including batteries

## Wireless Microphones

# WRR-862B UHF Synthesized Dual Diversity Tuner (6668U)

### Features

- Receives two independent RF signals on two separate channels
- Operates over a 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69)
- A space diversity system is employed on both channels to eliminate signal dropout and provide stable reception
- Compact and lightweight body; 400 g (14.1 oz) including batteries
- Easily mounts on Sony professional camcorders with the supplied attachment kit and case (\*)
- Two SMC9-4S (Sony 4-pin) audio output connectors on the top panel
- Rugged, diecast magnesium frame
- LED indicators for each channel to indicate RF input level (green/red indication), diversity reception status and transmitter battery alarm
- LCD screen for each channel to indicate operating channel/frequency, AF output level, RF input level, receiver battery status and accumulated battery operating time
- Five hours of continuous operation with four AA-size (LR6) alkaline batteries
- Capable of operating on external power from Sony camcorders via the supplied DC cable
- Selectable RF squelch threshold: 5 dB $\mu$ , 10 dB $\mu$ , 15 dB $\mu$  and OFF
- A stereo mini jack for monitoring the output sound (switchable: Tuner 1/2/mixed) with headphones (A monitor volume control is also included.)

(\*) A-8278-057-A mounting bracket (service part) may also be required.



### Applicable Models

CA-TX50 Camera Adaptor  
 DWV-709WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DWV-790WS Digital Betacam 16:9/4:3 Switchable Camcorder  
 DWV-970 Digital Betacam Camcorder  
 DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 HDW-730S HDCAM Camcorder  
 HDW-750 HDCAM Camcorder  
 HDW-750P HDCAM Camcorder  
 PDW-510 XDCAM Camcorder (DVCAM Recording)  
 PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)

### Supplied Accessories

Attachment case (1)  
 Mounting plate (1)  
 DC cable (1)  
 Output cable (2)  
 Antenna (2)

### Specifications

Receiving channel number:  
 2 channels  
 Receiving frequencies:  
 2 frequencies within 782 MHz to 806 MHz  
 Local oscillators:  
 1st: PLL synthesizer, 2nd: Crystal oscillator  
 De-emphasis:  
 50  $\mu$ s  
 System dynamic range:  
 96 dB or more (101 dB typical)

### Reference deviation:

$\pm 5$  kHz deviation at 1 kHz modulation  
 (Max. deviation:  $\pm 40$  kHz deviation at 1 kHz modulation)

### Selectivity:

60 dB or more at  $\pm 250$  kHz

### Spurious rejection:

70 dB or more

### Frequency response:

40 Hz to 18 kHz (typical)

### Signal-to-noise ratio:

60 dB or more (65 dB typical) at 60 dB $\mu$  RF input at reference deviation, A-weighted

### RF squelch level:

5 dB $\mu$ , 10 dB $\mu$ , 15 dB $\mu$  or OFF

### Audio output level:

-58 dBm at reference deviation

### Audio output connector:

SMC9-4S (Sony 4-pin, x 2), balanced

### Antenna connector:

BNC-R (x 2), 50  $\Omega$  (nominal) impedance

### Monitor output:

3.5 mm dia. mini jack (x 1, 5 mW), Tuner 1/2/mixed selectable

### Operating voltage:

Batteries: DC 6 V (four AA-size (LR6) alkaline batteries)  
 External: DC 12 V

### Battery life:

Approx. 5 hours with Sony AA-size (LR6) alkaline batteries at 25 °C (77 °F)

### Power consumption:

Batteries: approx. 230 mA at DC 6 V  
 External: approx. 135 mA at DC 12 V

### Dimensions (W x H x D):

89.0 x 120.0 x 29.5 mm  
 (3 5/8 x 4 3/4 x 1 3/16 inches)

### Mass:

Approx. 400 g (14.1 oz) including batteries

## Wireless Microphones

### WRT-807B UHF Synthesized Wireless Microphone (6264U)

#### Features

- Dynamic microphone capsule that is employed in the Sony F-780 professional vocal microphone
- High sound quality for vocals — powerful, crisp and clean sound
- Operates over a 24 MHz frequency band within the range of 758 MHz to 782 MHz (TV channels 62 and 65)
- LCD for display of operating channel, AF/RF conditions, attenuator, battery status and accumulated operating hours
- Up to 5 hours of continuous operation with one AA-size (LR6) battery
- 10 mW RF power output
- Lockable external power switch
- Transmits a low battery alarm to most Sony receivers



#### Supplied Accessories

- Microphone holder (PF1/2 thread) (1)
- Metal screw adaptor (PF1/2 to NS5/8) (1)

#### Specifications

- Oscillator: Crystal controlled PLL synthesizer
- Type of emission: 110KF3E
- Carrier frequencies: 758 MHz to 782 MHz
- Microphone capsule: Dynamic
- Directivity: Uni-directional
- RF power output: 10 mW (50  $\Omega$  load)

#### Antenna:

- 1/4 wave length wire antenna
- Reference deviation:  $\pm 5$  kHz (94 dB SPL\*, at 1 kHz)
- Frequency response: 50 Hz to 15 kHz (typical)
- Signal-to-noise ratio (A-weighted): 60 dB or more (A-weighted, at reference deviation)
- Attenuator adjustment range (PAD): 0 dB to 21 dB, variable in 3 dB steps
- Max. input sound pressure level: 151 dB SPL\* (with 21 dB attenuator)
- Operating voltage: DC 1.5 V (one AA-size (LR6) alkaline battery)

#### Battery life:

- Approx. 5 hours with Sony AA-size (LR6) alkaline battery at 25 °C (77 °F)
- Dimensions (diameter x length): 51 x 238 mm (2 1/8 x 9 3/8 inches)
- Mass: 440 g (15.5 oz) including battery

\*0 dB SPL = 2E-5 Pa.

### WRT-807B UHF Synthesized Wireless Microphone (6668U)

#### Features

- Dynamic microphone capsule that is employed in the Sony F-780 professional vocal microphone
- High sound quality for vocals — powerful, crisp and clean sound
- Operates over a 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 and 69)
- LCD for display of operating channel, AF/RF conditions, attenuator, battery status and accumulated operating hours
- Up to 5 hours of continuous operation with one AA-size (LR6) battery
- 10 mW RF power output
- Lockable external power switch
- Transmits a low battery alarm to most Sony receivers



#### Supplied Accessories

- Microphone holder (PF1/2 thread) (1)
- Metal screw adaptor (PF1/2 to NS5/8) (1)

#### Specifications

- Oscillator: Crystal controlled PLL synthesizer
- Type of emission: 110KF3E
- Carrier frequencies: 782 MHz to 806 MHz
- Microphone capsule: Dynamic
- Directivity: Uni-directional
- RF power output: 10 mW (50  $\Omega$  load)

#### Antenna:

- 1/4 wave length wire antenna
- Reference deviation:  $\pm 5$  kHz (94 dB SPL\*, at 1 kHz)
- Frequency response: 50 Hz to 15 kHz (typical)
- Signal-to-noise ratio (A-weighted): 60 dB or more (A-weighted, at reference deviation)
- Attenuator adjustment range (PAD): 0 dB to 21 dB, variable in 3 dB steps
- Max. input sound pressure level: 151 dB SPL\* (with 21 dB attenuator)
- Operating voltage: DC 1.5 V (one AA-size (LR6) alkaline battery)

#### Battery life:

- Approx. 5 hours with Sony AA-size (LR6) alkaline battery at 25 °C (77 °F)
- Dimensions (diameter x length): 51 x 238 mm (2 1/8 x 9 3/8 inches)
- Mass: 440 g (15.5 oz) including battery

\*0 dB SPL = 2E-5 Pa.

## Wireless Microphones

### WRT-808A UHF Synthesized Transmitter (64U)

#### Features

- Plug-on transmitter — converts a microphone to a wireless microphone
- Fitted with an XLR connector
- Operates over a 12 MHz frequency band within the range of 770 MHz to 782 MHz (TV channels 64 and 65)
- Compact and lightweight body, providing balanced handling
- Durable connecting mechanism for dependable operation
- Switchable RF output level: 50 mW for long working distance or 10 mW for simultaneous multi-channel operation
- Variable input attenuation, 0 to 50 dB
- Battery alarm transmitted to compatible receivers
- Audio input level (reference and peak) indication by LED
- Up to 4 hours of continuous operation with two AA-sized (LR6) alkaline batteries



#### Supplied Accessories

Soft case (1)

#### Specifications

##### Oscillator:

Crystal controlled PLL synthesizer

##### Type of Emission:

110KF3E

##### Carrier frequency:

770 MHz to 782 MHz

##### RF power output:

50 mW or 10 mW selectable

##### Antenna:

Internal antenna

##### Reference deviation:

$\pm 9$  kHz (-60 dBV\*, at 1 kHz)

##### Frequency response:

70 Hz to 15 kHz (typical)

##### Signal-to-noise ratio:

67 or more (A-weighted, at reference deviation)

##### Attenuator adjustment range (PAD):

0 to 50 dB, continuous

##### Max. input level:

+16 dBV\*

##### Input connector:

XLR-3-11 type

##### Operating voltage:

DC 3.0 V (two AA-size (LR6) alkaline battery)

##### Battery life:

Approx. 4 hours with Sony (LR6) AA-size (LR6) alkaline batteries at 25 °C (77 °F)

##### Dimensions:

40 (W) x 108 (H) x 40 (D) mm  
(1 5/8 x 4 3/8 x 1 5/8 inches)

##### Mass:

175 g (6.18 oz) including batteries

\* 0 dBV = 1 V<sub>r.m.s.</sub>

### WRT-808A UHF Synthesized Transmitter (66U)

#### Features

- Plug-on transmitter — converts a microphone to a wireless microphone
- Fitted with an XLR connector
- Operates over a 12 MHz frequency band within the range of 782 MHz to 794 MHz (TV channels 66 and 67)
- Compact and lightweight body, providing balanced handling
- Durable connecting mechanism for dependable operation
- Switchable RF output level: 50 mW for long working distance or 10 mW for simultaneous multi-channel operation
- Variable input attenuation, 0 to 50 dB
- Battery alarm transmitted to compatible receivers
- Audio input level (reference and peak) indication by LED
- Up to 4 hours of continuous operation with two AA-sized (LR6) alkaline batteries



#### Supplied Accessories

Soft case (1)

#### Specifications

##### Oscillator:

Crystal controlled PLL synthesizer

##### Type of Emission:

110KF3E

##### Carrier frequency:

782 MHz to 794 MHz

##### RF power output:

50 mW or 10 mW selectable

##### Antenna:

Internal antenna

##### Reference deviation:

$\pm 9$  kHz (-60 dBV\*, at 1 kHz)

##### Frequency response:

70 Hz to 15 kHz (typical)

##### Signal-to-noise ratio:

67 or more (A-weighted, at reference deviation)

##### Attenuator adjustment range (PAD):

0 to 50 dB, continuous

##### Max. input level:

+16 dBV\*

##### Input connector:

XLR-3-11 type

##### Operating voltage:

DC 3.0 V (two AA-size (LR6) alkaline battery)

##### Battery life:

Approx. 4 hours with Sony (LR6) AA-size (LR6) alkaline batteries at 25 °C (77 °F)

##### Dimensions:

40 (W) x 108 (H) x 40 (D) mm  
(1 5/8 x 4 3/8 x 1 5/8 inches)

##### Mass:

175 g (6.18 oz) including batteries

\* 0 dBV = 1 V<sub>r.m.s.</sub>

Wireless Microphones

WRT-808A UHF Synthesized Transmitter (68U)

Features

- Plug-on transmitter — converts a microphone to a wireless microphone
- Fitted with an XLR connector
- Operates over a 12 MHz frequency band within the range of 794 MHz to 806 MHz (TV channels 68 and 69)
- Compact and lightweight body, providing balanced handling
- Durable connecting mechanism for dependable operation
- Switchable RF output level: 50 mW for long working distance or 10 mW for simultaneous multi-channel operation
- Variable input attenuation, 0 to 50 dB
- Battery alarm transmitted to compatible receivers
- Audio input level (reference and peak) indication by LED
- Up to 4 hours of continuous operation with two AA-sized (LR6) alkaline batteries



Supplied Accessories

Soft case (1)

Specifications

Oscillator:

Crystal controlled PLL synthesizer

Type of Emission:

110KF3E

Carrier frequency:

794 MHz to 806 MHz

RF power output:

50 mW or 10 mW selectable

Antenna:

Internal antenna

Reference deviation:

±9 kHz (-60 dBV\*, at 1 kHz)

Frequency response:

70 Hz to 15 kHz (typical)

Signal-to-noise ratio:

67 or more (A-weighted, at reference deviation)

Attenuator adjustment range (PAD):

0 to 50 dB, continuous

Max. input level:

+16 dBV\*

Input connector:

XLR-3-11 type

Operating voltage:

DC 3.0 V (two AA-size (LR6) alkaline battery)

Battery life:

Approx. 4 hours with Sony (LR6) AA-size (LR6) alkaline batteries at 25 °C (77 °F)

Dimensions:

40 (W) x 108 (H) x 40 (D) mm  
(1 5/8 x 4 3/8 x 1 5/8 inches)

Mass:

175 g (6.18 oz) including batteries

\* 0 dBV = 1 V<sub>r.m.s.</sub>

## Wireless Microphones

# WRT-822A UHF Synthesized Wireless Transmitter (64U)

### Features

●Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries ●Compact and lightweight body; 63 (W) x 103 (H) x 17 (D) mm (2 1/2 x 4 1/8 x 11/18 inches) ●Operates over a 12 MHz frequency band within the range of 770 MHz to 782 MHz (TV channels 64 and 65) ●Easy-to-read LCD for comprehensive system information such as channel number, channel frequency in MHz, AF, RF, attenuator, battery status, accumulated working time ●20 mW RF power output ●Accepts professional lavalier microphones fitted with SMC9-4P type connector

### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 WLL-RX55 Wireless Camera Receiver

### Supplied Accessories

Soft case (1)

### Optional Accessories

ECM-44BC Lavalier Microphone  
 ECM-77BC Lavalier Microphone  
 ECM-88BC Lavalier Microphone  
 ECM-310BC Headset Microphone  
 ECM-350BC Headset Microphone

### Specifications

#### Oscillator:

Crystal controlled PLL synthesizer

#### Type of emission:

110KF3E

#### Carrier frequency:

770 MHz to 782 MHz

#### RF power output:

20 mW (50  $\Omega$  load)

#### Antenna:

1/4 wave length whip antenna

#### Reference deviation:

$\pm 5$  kHz (-60 dBV\*, 1 kHz)

#### Frequency response:

70 Hz to 15 kHz (typical)

#### Signal-to-noise ratio:

60 dB (A-weighted, at reference deviation)

#### Attenuator adjustment range (pad):

0 to 21 dB, variable in 3 dB steps

#### Max. input level:

-3 dBV\* (with 21 dB attenuator)

#### Operating voltage:

DC 3 V (two AA-size (LR6) alkaline batteries)

#### Battery life:

Approx. 6 hours with Sony AA-size (LR6) alkaline batteries at 25 °C (77 °F)

#### Dimensions:

63 (W) x 103 (H) x 17 (D) mm  
(2 1/2 x 4 1/8 x 11/16 inches)

#### Mass:

145 g (5.1 oz) with batteries



\* 0 dBV = 1 V<sub>r.m.s.</sub>

## Wireless Microphones

# WRT-822A UHF Synthesized Wireless Transmitter (66U)

### Features

●Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries ●Compact and lightweight body; 63 (W) x 103 (H) x 17 (D) mm (2 1/2 x 4 1/8 x 11/18 inches) ●Operates over a 12 MHz frequency band within the range of 782 MHz to 794 MHz (TV channels 66 and 67) ●Easy-to-read LCD for comprehensive system information such as channel number, channel frequency in MHz, AF, RF, attenuator, battery status, accumulated working time ●20 mW RF power output ●Accepts professional lavalier microphones fitted with SMC9-4P type connector

### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 WLL-RX55 Wireless Camera Receiver

### Supplied Accessories

Soft case (1)

### Optional Accessories

ECM-44BC Lavalier Microphone  
 ECM-66BC Lavalier Microphone  
 ECM-77BC Lavalier Microphone  
 ECM-88BC Lavalier Microphone  
 ECM-310BC Headset Microphone  
 ECM-350BC Headset Microphone

### Specifications

#### Oscillator:

Crystal controlled PLL synthesizer

#### Type of emission:

110KF3E

#### Carrier frequency:

782 MHz to 794 MHz

#### RF power output:

20 mW (50  $\Omega$  load)

#### Antenna:

1/4 wave length whip antenna

#### Reference deviation:

$\pm 5$  kHz (-60 dBV\*, 1 kHz)

#### Frequency response:

70 Hz to 15 kHz (typical)

#### Signal-to-noise ratio:

60 dB (A-weighted, at reference deviation)

#### Attenuator adjustment range (pad):

0 to 21 dB, variable in 3 dB steps

#### Max. input level:

-3 dBV\* (with 21 dB attenuator)

#### Operating voltage:

DC 3 V (two AA-size (LR6) alkaline batteries)

#### Battery life:

Approx. 6 hours with Sony AA-size (LR6) alkaline batteries at 25 °C (77 °F)

#### Dimensions:

63 (W) x 103 (H) x 17 (D) mm  
(2 1/2 x 4 1/8 x 11/16 inches)

#### Mass:

145 g (5.1 oz) with batteries

\* 0 dBV = 1 V<sub>r.m.s.</sub>



## Wireless Microphones

# WRT-822A UHF Synthesized Wireless Transmitter (68U)

### Features

●Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries ●Compact and lightweight body; 63 (W) x 103 (H) x 17 (D) mm (2 1/2 x 4 1/8 x 11/18 inches) ●Operates over a 12 MHz frequency band within the range of 794 MHz to 806 MHz (TV channels 68 and 69) ●Easy-to-read LCD for comprehensive system information such as channel number, channel frequency in MHz, AF, RF, attenuator, battery status, accumulated working time ●20 mW RF power output ●Accepts professional lavalier microphones fitted with SMC9-4P type connector

### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera  
 WLL-RX55 Wireless Camera Receiver

### Supplied Accessories

Soft case (1)

### Optional Accessories

ECM-44BC Lavalier Microphone  
 ECM-66BC Lavalier Microphone  
 ECM-77BC Lavalier Microphone  
 ECM-88BC Lavalier Microphone  
 ECM-310BC Headset Microphone  
 ECM-350BC Headset Microphone

### Specifications

#### Oscillator:

Crystal controlled PLL synthesizer

#### Type of emission:

110KF3E

#### Carrier frequency:

794 MHz to 806 MHz

#### RF power output:

20 mW (50  $\Omega$  load)

#### Antenna:

1/4 wave length whip antenna

#### Reference deviation:

$\pm 5$  kHz (-60 dBV\*, 1 kHz)

#### Frequency response:

70 Hz to 15 kHz (typical)

#### Signal-to-noise ratio:

60 dB (A-weighted, at reference deviation)

#### Attenuator adjustment range (pad):

0 to 21 dB, variable in 3 dB steps

#### Max. input level:

-3 dBV\* (with 21 dB attenuator)

#### Operating voltage:

DC 3 V (two AA-size (LR6) alkaline batteries)

#### Battery life:

Approx. 6 hours with Sony AA-size (LR6) alkaline batteries at 25 °C (77 °F)

#### Dimensions:

63 (W) x 103 (H) x 17 (D) mm  
(2 1/2 x 4 1/8 x 11/16 inches)

#### Mass:

145 g (5.1 oz) with batteries



\* 0 dBV = 1 V.r.m.s.

## Wireless Microphones

# WRT-822B UHF Synthesized Wireless Transmitter (6264U)

### Features

- Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries
- Compact and lightweight body; 63 (W) x 103 (H) x 17 (D) mm (2 1/2 x 4 1/8 x 11/16 inches)
- Operates over a 24 MHz frequency band within the range of 758 MHz to 782 MHz (TV channels 62 to 65)
- Easy-to-read LCD for comprehensive system information such as channel number, channel frequency in MHz, AF, RF, attenuator, battery status, accumulated working time
- 20 mW RF power output
- Accepts professional lavalier microphones fitted with SMC9-4P type connector

### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera

### Supplied Accessories

Soft case (1)

### Optional Accessories

ECM-44BC Lavalier Microphone  
 ECM-66BC Lavalier Microphone  
 ECM-77BC Lavalier Microphone  
 ECM-88BC Lavalier Microphone  
 ECM-350BC Headset Microphone  
 ECM-310BC Headset Microphone

### Specifications

#### Oscillator:

Crystal controlled PLL synthesizer

#### Type of emission:

110KF3E

#### Carrier frequency:

758 MHz to 782 MHz

#### RF power output:

20 mW (50  $\Omega$  load)

#### Antenna:

1/4 wave length whip antenna

#### Reference deviation:

$\pm 5$  kHz (-60 dBV, 1 kHz)

#### Frequency response:

70 Hz to 15 kHz (typical)

#### Signal-to-noise ratio:

60 dB (A-weighted, at reference deviation)

#### Attenuator adjustment range (pad):

0 to 21 dB, variable in 3 dB steps

#### Max. input level:

-3 dBV (with 21 dB attenuator)

#### Operating voltage:

DC 3 V (two AA-size (LR6) alkaline batteries)

#### Battery life:

Approx. 6 hours with Sony AA-size (LR6) alkaline batteries at 25 °C (77 °F)

#### Dimensions:

63 (W) x 103 (H) x 17 (D) mm  
 (2 1/2 x 4 1/8 x 11/16 inches)

#### Mass:

145 g (5.1 oz) including batteries

\* 0 dBV = 1 V<sub>r.m.s.</sub>



## Wireless Microphones

# WRT-822B UHF Synthesized Wireless Transmitter (6668U)

### Features

- Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries
- Compact and lightweight body; 63 (W) x 103 (H) x 17 (D) mm (2 1/2 x 4 1/8 x 11/18 inches)
- Operates over a 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69)
- Easy-to-read LCD for comprehensive system information such as channel number, channel frequency in MHz, AF, RF, attenuator, battery status, accumulated working time
- 20 mW RF power output
- Accepts professional lavalier microphones fitted with SMC9-4P type connector

### Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
 DXC-D50K 3-chip CCD Portable Color Camera  
 DXC-D50L 3-chip CCD Portable Color Camera  
 DXC-D50WSH 3-chip CCD Portable Color Camera  
 DXC-D50WSL 3-chip CCD Portable Color Camera

### Supplied Accessories

Soft case (1)

### Optional Accessories

ECM-44BC Lavalier Microphone  
 ECM-66BC Lavalier Microphone  
 ECM-77BC Lavalier Microphone  
 ECM-88BC Lavalier Microphone  
 ECM-350BC Headset Microphone  
 ECM-310BC Headset Microphone

### Specifications

#### Oscillator:

Crystal controlled PLL synthesizer

#### Type of emission:

110KF3E

#### Carrier frequency:

782 MHz to 806 MHz

#### RF power output:

20 mW (50  $\Omega$  load)

#### Antenna:

1/4 wave length whip antenna

#### Reference deviation:

$\pm 5$  kHz (-60 dBV, 1 kHz)

#### Frequency response:

70 Hz to 15 kHz (typical)

#### Signal-to-noise ratio:

60 dB (A-weighted, at reference deviation)

#### Attenuator adjustment range (pad):

0 to 21 dB, variable in 3 dB steps

#### Max. input level:

-3 dBV (with 21 dB attenuator)

#### Operating voltage:

DC 3 V (two AA-size (LR6) alkaline batteries)

#### Battery life:

Approx. 6 hours with Sony AA-size (LR6) alkaline batteries at 25 °C (77 °F)

#### Dimensions:

63 (W) x 103 (H) x 17 (D) mm  
 (2 1/2 x 4 1/8 x 11/16 inches)

#### Mass:

145 g (5.1 oz) including batteries



\* 0 dBV = 1 V<sub>r.m.s.</sub>

Wireless Microphones

WRT-847B UHF Synthesized Transmitter Unit (6264U)

Features

- A choice of five optional microphone capsules, each with specific characteristics to suit a range of different applications. (One capsule is required for the WRT-847B for function.)
- Switchable audio compander time constant to suit different capsules
- Selectable RF output level: 10 mW or 50 mW
- Audio gain and attenuation settings within the range of +9 dB to -12 dB in 3 dB steps
- Operates over a 24 MHz frequency band within the range of 758 MHz to 782 MHz (TV channels 62 and 65)
- Lockable external power switch (ON/OFF)
- Easy-to-read LCD with back light indicates operating conditions such as channel number/frequency, audio input level, compander time constant, battery status and accumulated battery operating time
- Eight hours of continuous operation with two AA-size (LR6) alkaline batteries
- Transmits a low battery warning to most Sony receivers



Applicable Models

- DXC-D50H 3-chip CCD Portable Color Camera
- DXC-D50K 3-chip CCD Portable Color Camera
- DXC-D50L 3-chip CCD Portable Color Camera
- DXC-D50WSH 3-chip CCD Portable Color Camera
- DXC-D50WSL 3-chip CCD Portable Color Camera

Supplied Accessories

- Microphone holder (1)
- Stand adaptor (PF1/2 to NS5/8 type) (1)
- Soft case (1)
- Channel color seal (1)

Optional Accessories

- CU-F780 Capsule Unit
- CU-G780 Capsule Unit
- CU-E700 Capsule Unit
- CU-E672 Capsule Unit
- CU-F117 Capsule Unit

Specifications

- Oscillator:
  - Crystal controlled PLL synthesizer
- Type of emission:
  - 110KF3E
- Carrier frequencies:
  - 758 MHz to 782 MHz
- RF power output:
  - 10 mW/50 mW selectable (50  $\Omega$  load)

- Type of antenna:
  - 1/4 wave length whip antenna
- Pre-emphasis:
  - 50  $\mu$ s
- Reference deviation:
  - $\pm$ 5 kHz (94 dB SPL\*, 1kHz)
- Frequency response:
  - 50 Hz to 18 kHz (typical)
- Signal to noise ratio:
  - 60 dB or more (A-weighted, at reference deviation)
- Audio gain control:
  - 12 dB to 9 dB (in 3 dB steps)
- Max. input sound pressure level:
  - 142 dB SPL\* (with CU-F780/G780/E700/F117 at audio gain -12 dB)
  - 120 dB SPL\* (with CU-E672)
- Power requirements:
  - DC 3.0 V (two LR6 AA-size alkaline batteries)
- Battery life:
  - Approx. 8 hours at 25°C (77°F) with Sony AA-size (LR6) alkaline batteries, at 10 mW RF output
- Dimensions (diameter x length):
  - 37 x 150 mm (1 1/2 x 6 inches)
- Mass:
  - Approx. 190 g (6.7 oz) including batteries

\* 0 dB SPL = 2E-5 Pa.

Wireless Microphones

WRT-847B UHF Synthesized Transmitter Unit (6668U)

Features

●A choice of five optional microphone capsules, each with specific characteristics to suit a range of different applications. (One capsule is required for the WRT-847B for function.) ●Switchable audio compander time constant to suit different capsules ●Selectable RF output level: 10 mW or 50 mW ●Audio gain and attenuation settings within the range of +9 dB to -12 dB in 3 dB steps ●Operates over a 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 and 69) ●Lockable external power switch (ON/OFF) ●Easy-to-read LCD with back light indicates operating conditions such as channel number/frequency, audio input level, compander time constant, battery status and accumulated battery operating time ●Eight hours of continuous operation with two AA-size (LR6) alkaline batteries ●Transmits a low battery warning to most Sony receivers



Applicable Models

DXC-D50H 3-chip CCD Portable Color Camera  
DXC-D50K 3-chip CCD Portable Color Camera  
DXC-D50L 3-chip CCD Portable Color Camera  
DXC-D50WSH 3-chip CCD Portable Color Camera  
DXC-D50WSL 3-chip CCD Portable Color Camera

Supplied Accessories

Microphone holder (1)  
Stand adaptor (PF1/2 to NS5/8 type) (1)  
Soft case (1)  
Channel color seal (1)

Optional Accessories

CU-F780 Capsule Unit  
CU-G780 Capsule Unit  
CU-E700 Capsule Unit  
CU-E672 Capsule Unit  
CU-F117 Capsule Unit

Specifications

Oscillator:  
Crystal controlled PLL synthesizer  
Type of emission:  
110KF3E  
Carrier frequencies:  
782 MHz to 806 MHz  
RF power output:  
10 mW/50 mW selectable (50 Ω load)

Type of antenna:  
1/4 wave length whip antenna  
Pre-emphasis:  
50 μs  
Reference deviation:  
±5 kHz (94 dB SPL\*, 1kHz)  
Frequency response:  
50 Hz to 18 kHz (typical)  
Signal to noise ratio:  
60 dB or more (A-weighted, at reference deviation)  
Audio gain control:  
-12 dB to 9 dB (in 3 dB steps)  
Max. input sound pressure level:  
142 dB SPL\* (with CU-F780/G780/E700/F117 at audio gain -12 dB)  
120 dB SPL\* (with CU-E672)  
Power requirements:  
DC 3.0 V (two LR6 AA-size alkaline batteries)  
Battery life:  
Approx. 8 hours at 25°C (77°F) with Sony AA-size (LR6) alkaline batteries, at 10 mW RF output  
Dimensions (diameter x length):  
37 x 150 mm (1 1/2 x 6 inches)  
Mass:  
Approx. 190 g (6.7 oz) including batteries

\* 0 dB SPL = 2E-5 Pa.

Wireless Microphones

WRT-867A UHF Synthesized Wireless Microphone (68U)

Features

- Dynamic microphone capsule with super-cardioid polar pattern
- Resilient structure for extremely high quality sound
- Incorporates a high quality, edgewise-winding voice coil with lightweight CCAW (Copper Clad Aluminum Wire) and AlNiCo magnet, which provides powerful, crisp and clear sound as well as presence in the middle and high frequency range
- Ideal for critical vocal applications for broadcast program and film production
- Operates in the 794 MHz to 806 MHz UHF frequency band (TV channels 68 and 69)
- Channel select switches, audio attenuator switch and LCD indicator inside the body to prevent accidental operation
- LED power indicator
- Approx. four hours of continuous operation with one AA-size (LR6) alkaline battery (at 10 mW RF output level)



Supplied Accessories

- Microphone holder (PF 1/2) (1)
- Stand screw adaptor (PF 1/2 to NS 5/8) (1)

Specifications

- Microphone capsule:
  - Dynamic
- Directivity:
  - Uni-directional
- Oscillator:
  - Crystal-controlled PLL synthesizer
- Type of emission:
  - 110KF3E
- Carrier Frequency:
  - 794 MHz to 806 MHz

- RF power output:
  - 10 mW (50  $\Omega$  load)
- Antenna:
  - Helical antenna
- Reference deviation:
  - $\pm$  5 kHz (94 dB SPL\*, 1 kHz)
- Frequency response:
  - 40 Hz to 20 kHz (typical)
- Signal-to-noise ratio:
  - 60 dB or more (A-weighted, at reference deviation)
- Attenuator adjustment range (pad):
  - 0, 6 dB or 12 dB switchable
- Max. input sound pressure level:
  - 142 dB SPL\* (with 12 dB attenuator)

- Operating voltage:
  - 1.5 V (one AA-size (LR6) alkaline battery)
- Battery life:
  - Approx. 4 hours with Sony AA-size (LR6) alkaline battery at 25 °C (77 °F)
- Dimensions (diameter x length):
  - 51 x 195 mm (2 1/8 x 7 3/4 inches)
- Mass:
  - 320 g (11.2 oz) including battery

\* 0 dB SPL = 2E-5 Pa.

## Wireless Microphones

# WRT-8B UHF Synthesized Transmitter (6264U)

### Features

- Extremely compact and lightweight: 140 g including batteries, 63 (W) x 83 (H) x 17 (D) mm
- Operates over a 24 MHz frequency band within the range of 758 MHz to 782 MHz (TV channels 62 to 65)
- Selectable RF output powers: 10 mW or 50 mW
- Switchable input level: LINE level or MIC level
- Variable audio attenuator
- Approx. 13 hours of continuous operation with two AA-size (LR6) alkaline batteries at 10 mW output (Approx. six hours of operation at 50 mW output)
- Removable antenna with SMA connector
- LCD screen indicates extensive information such as operating channel/frequency, audio input level, RF output level, transmitter battery status and accumulated operating time
- A red LED indicator flashes when the AF level exceeds a designated level
- Transmits a low battery warning to Sony receivers
- Rugged, die-cast magnesium frame
- Accepts the output of lavalier microphones fitted with a Sony SMC9-4P connector



### Supplied Accessories

Soft case (1)  
Spare battery case (1)  
Microphone cable (1)

### Optional Accessories

ECM-44BC Lavalier Microphone  
ECM-66BC Lavalier Microphone  
ECM-77BC Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-310BC Headset Microphone  
ECM-350BC Headset Microphone

### Battery life:

Approx. 6 hours with Sony LR6 alkaline batteries at 25 °C (77 °F) at 50 mW output  
Approx. 13 hours with Sony LR6 alkaline batteries at 25 °C (77 °F) at 10 mW output

### Dimensions:

63 (W) x 83 (H) x 17 (D) mm  
(2 1/2 x 3 3/8 x 11/16 inches)

### Mass:

Approx. 140 g (4.9 oz) including batteries

### Specifications

#### Oscillator:

Crystal-controlled PLL synthesizer

#### Carrier frequencies:

758 MHz to 782 MHz

#### Oscillator:

Crystal controlled PLL synthesizer

#### RF power output:

50 mW/10 mW (e.r.p.) selectable

#### Antenna:

1/4 wavelength wire (SMA-J type connector)

#### Frequency response:

40 Hz to 20 kHz (typical)

#### Reference deviation:

±5 kHz (-60 dBV, 1 kHz input, MIC position)

±5 kHz (-20 dBu, 1 kHz input, LINE position)

#### Signal-to-noise ratio:

60 dB or more (A-weighted)

#### Attenuator adjustment range:

0 to 40 dB, continuous

#### Max. input level:

-2 dBV (1 kHz input, MIC position)

+38 dBu (1 kHz input, LINE position)

#### Audio input level:

MIC level/LINE level switchable

#### Audio input connector:

Sony SMC9-4S type

#### Power requirements:

DC 3.0 V (with two LR6 alkaline batteries)

## Wireless Microphones

# WRT-8B UHF Synthesized Transmitter (6668U)

### Features

- Extremely compact and lightweight: 140 g including batteries, 63 (W) x 83 (H) x 17 (D) mm
- Operates over a 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69)
- Selectable RF output powers: 10 mW or 50 mW
- Switchable input level: LINE level or MIC level
- Variable audio attenuator
- Approx. 13 hours of continuous operation with two AA-size (LR6) alkaline batteries at 10 mW output (Approx. six hours of operation at 50 mW output)
- Removable antenna with SMA connector
- LCD screen indicates extensive information such as operating channel/frequency, audio input level, RF output level, transmitter battery status and accumulated operating time
- A red LED indicator flashes when the AF level exceeds a designated level
- Transmits a low battery warning to Sony receivers
- Rugged, die-cast magnesium frame
- Accepts the output of lavalier microphones fitted with a Sony SMC9-4P connector



### Supplied Accessories

Soft case (1)  
Spare battery case (1)  
Microphone cable (1)

### Optional Accessories

ECM-44BC Lavalier Microphone  
ECM-66BC Lavalier Microphone  
ECM-77BC Lavalier Microphone  
ECM-88BC Lavalier Microphone  
ECM-310BC Headset Microphone  
ECM-350BC Headset Microphone

### Battery life:

Approx. 6 hours with Sony LR6 alkaline batteries at 25 °C (77 °F) at 50 mW output  
Approx. 13 hours with Sony LR6 alkaline batteries at 25 °C (77 °F) at 10 mW output

### Dimensions:

63 (W) x 83 (H) x 17 (D) mm  
(2 1/2 x 3 3/8 x 11/16 inches)

### Mass:

Approx. 140 g (4.9 oz) including batteries

### Specifications

#### Oscillator:

Crystal-controlled PLL synthesizer

#### Carrier frequencies:

782 MHz to 806 MHz

#### Oscillator:

Crystal controlled PLL synthesizer

#### RF power output:

50 mW/10 mW (e.r.p.) selectable

#### Antenna:

1/4 wavelength wire (SMA-J type connector)

#### Frequency response:

40 Hz to 20 kHz (typical)

#### Reference deviation:

±5 kHz (-60 dBV, 1 kHz input, MIC position)

±5 kHz (-20 dBu, 1 kHz input, LINE position)

#### Signal-to-noise ratio:

60 dB or more (A-weighted)

#### Attenuator adjustment range:

0 to 40 dB, continuous

#### Max. input level:

-2 dBV (1 kHz input, MIC position)

+38 dBu (1 kHz input, LINE position)

#### Audio input level:

MIC level/LINE level switchable

#### Audio input connector:

Sony SMC9-4S type

#### Power requirements:

DC 3.0 V (with two LR6 alkaline batteries)

## Wireless Microphones

### WRU-806B UHF Synthesized Tuner Unit (6264U)

#### Features

- Dedicated plug-in diversity receiver for MB-806A tuner base unit
- Operates in the 758 MHz to 782 MHz UHF frequency band (TV channels 62 to 65)
- Auto channel assignment for extra receiver modules with self-detection and skipping of unusable channels
- Pre-programmed groups for inter-modulation free operation of multi-channel system
- AF, RF and battery alarm indication by both LED and LCD to double check operating condition
- Use of SAW filters for exceptional rejection of unwanted signals while maintaining the best signal integrity of the desired signals
- Space diversity reception for dependable RF reception



#### Applicable Models

MB-806A UHF Tuner Base Unit (758 MHz to 806 MHz)  
SRP-X700P Digital Powered Mixer (120V)

#### Supplied Accessories

Operation manual (1)

#### Specifications

Receiving channel:

1 channel

Receiving frequency:

758 MHz to 782 MHz

Oscillator:

1st: PLL synthesizer, 2nd: Crystal oscillator

De-emphasis:

50  $\mu$ s

Reference Deviation:

$\pm 5$  kHz deviation at 1 kHz modulation  
(Max. deviation:  $\pm 40$  kHz deviation at 1 kHz modulation)

Selectivity:

60 dB or more at  $\pm 250$  kHz

Spurious rejection ratio:

70 dB or more

Frequency range:

70 to 18 kHz (typical)

Signal-to-noise ratio:

60 dB or more at 60 dB $\mu$  RF input at reference deviation, A-weighted

Harmonic distortion:

Less than 1.0%

RF muting level:

30 dB $\mu$

Operating voltage:

DC 9 V

Current consumption:

225 mA or less

Dimensions (W x H x D):

57 x 26 x 122 mm (2 1/4 x 1 1/16 x 4 7/8 inches)

Mass

160 g (5.7 oz)

### WRU-806B UHF Synthesized Tuner Unit (6668U)

#### Features

- Dedicated plug-in diversity receiver for MB-806A tuner base unit
- Operates in the 782 MHz to 806 MHz UHF frequency band (TV channels 66 to 69)
- Auto channel assignment for extra receiver modules with self-detection and skipping of unusable channels
- Pre-programmed groups for inter-modulation free operation of multi-channel system
- AF, RF and battery alarm indication by both LED and LCD to double check operating condition
- Use of SAW filters for exceptional rejection of unwanted signals while maintaining the best signal integrity of the desired signals
- Space diversity reception for dependable RF reception



#### Applicable Models

MB-806A UHF Tuner Base Unit (758 MHz to 806 MHz)  
SRP-X700P Digital Powered Mixer (120V)

#### Supplied Accessories

Operation manual (1)

#### Specifications

Receiving channel:

1 channel

Receiving frequency:

782 MHz to 806 MHz

Oscillator:

1st: PLL synthesizer, 2nd: Crystal oscillator

De-emphasis:

50  $\mu$ s

Reference Deviation:

$\pm 5$  kHz deviation at 1 kHz modulation  
(Max. deviation:  $\pm 40$  kHz deviation at 1 kHz modulation)

Selectivity:

60 dB or more at  $\pm 250$  kHz

Spurious rejection ratio:

70 dB or more

Frequency range:

70 to 18 kHz (typical)

Signal-to-noise ratio:

60 dB or more at 60 dB $\mu$  RF input at reference deviation, A-weighted

Harmonic distortion:

Less than 1.0%

RF muting level:

30 dB $\mu$

Operating voltage:

DC 9 V

Current consumption:

225 mA or less

Dimensions (W x H x D):

57 x 26 x 122 mm (2 1/4 x 1 1/16 x 4 7/8 inches)

Mass

160 g (5.7 oz)

## Wireless Microphones

### WRU-8N UHF Synthesized Tuner Unit (6264U)

#### Features

- Plug-in diversity receiver for MB-8N Tuner Base Unit
- Jog dial control for channel number/group selection
- Operates over a 24 MHz frequency band within the range of 758 MHz to 782 MHz (TV channels 62 to 65)
- LCD screen displays operating channel/frequency and RF level
- LED indicators display space diversity reception status, AF input status and a low battery warning of Sony transmitters
- Auto channel assignment of additional receiver modules for instant programming of interference-free multi-channel operation. Automatically skips unusable channels and assigns open channels.
- Space diversity reception for stable RF reception



#### Applicable Models

MB-8N Tuner Base Unit (U2)

#### Specifications

Receiving channel:

1 channel

Receiving frequencies:

758 MHz to 782 MHz

Local oscillators:

PLL synthesizer

Reference deviation:

±5 kHz deviation at 1 kHz modulation

(Maximum deviation: ±40 kHz at 1 kHz modulation)

Signal-to-noise ratio:

60 dB or more (65 dB typical) at 60 dBμ RF input at reference deviation, A-weighted

Selectivity:

60 dB or more at ±250 kHz detuned

RF squelch level:

10 dBμ, 20 dBμ, 30 dBμ or off

De-emphasis:

50 μs

Power consumption:

DC 5 V (supplied from MB-8N)

Dimensions (W x H x D):

56.0 x 30.7 x 149.0 mm  
(2 1/4 x 1 1/4 x 5 7/8 inches)

Mass:

165 g (5.8 oz)

### WRU-8N UHF Synthesized Tuner Unit (6668U)

#### Features

- Plug-in diversity receiver for MB-8N Tuner Base Unit
- Jog dial control for channel number/group selection
- Operates over a 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69)
- LCD screen displays operating channel/frequency and RF level
- LED indicators display space diversity reception status, AF input status and a low battery warning of Sony transmitters
- Auto channel assignment of additional receiver modules for instant programming of interference-free multi-channel operation. Automatically skips unusable channels and assigns open channels.
- Space diversity reception for stable RF reception



#### Applicable Models

MB-8N Tuner Base Unit (U2)

#### Specifications

Receiving channel:

1 channel

Receiving frequencies:

782 MHz to 806 MHz

Local oscillators:

PLL synthesizer

Reference deviation:

±5 kHz deviation at 1 kHz modulation

(Maximum deviation: ±40 kHz at 1 kHz modulation)

Signal-to-noise ratio:

60 dB or more (65 dB typical) at 60 dBμ RF input at reference deviation, A-weighted

Selectivity:

60 dB or more at ±250 kHz detuned

RF squelch level:

10 dBμ, 20 dBμ, 30 dBμ or off

De-emphasis:

50 μs

Power consumption:

DC 5 V (supplied from MB-8N)

Dimensions (W x H x D):

56.0 x 30.7 x 149.0 mm  
(2 1/4 x 1 1/4 x 5 7/8 inches)

Mass:

165 g (5.8 oz)

## Wireless Microphones

### MB-806A UHF Tuner Base Unit (758 MHz to 806 MHz)

#### Features

- Modular design, 1U height 19-inch rack
- Accommodates up to six WRU-806A/806B for up to six simultaneous channels of operation
- Use of AN-820A antennas and WD-820A or WD-880A antenna divider allows further multi-channel operation
- Balanced XLR output connectors for each tuner and mix output
- RF input attenuator switch (10 dB/0 dB)
- Selectable output level: -58 dBm (for MIC) or -20 dBm (for LINE) at  $\pm 5$  kHz deviation at 1kHz modulation
- Space diversity reception for dependable RF reception
- Auto channel assignment of additional receiver modules for instant programming of interference-free multi-channel operation. Automatically skips unusable channels and assigns clear channels.
- Supplied passive antennas for rear mounting (with provision for front mounting)



(The WRU-806A/806B is not included.)



#### Supplied Accessories

Antenna (2)  
AC power cord (1)

#### Optional Accessories

URX-M1 UHF Synthesized Tuner Unit (6264U)  
URX-M1 UHF Synthesized Tuner Unit (6668U)  
WRU-806A UHF Synthesized Tuner Unit (64U)  
WRU-806A UHF Synthesized Tuner Unit (66U)  
WRU-806A UHF Synthesized Tuner Unit (68U)  
WRU-806B UHF Synthesized Tuner Unit (6264U)  
WRU-806B UHF Synthesized Tuner Unit (6668U)  
AN-820A UHF Antenna

#### Specifications

Receiving frequency range:  
758 MHz to 806 MHz  
Audio output level:  
-20 dBm/-58 dBm at reference deviation  
Audio output connector:  
XLR-3-32 (x 7, balanced)  
Antenna attenuator level:  
0 dB or 10 dB  
Antenna connector:  
BNC-R type (x 2), 50 $\Omega$  (nominal) impedance

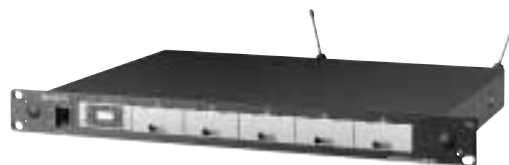
#### Power requirements:

AC 120 V, 60 Hz  
Power consumption:  
30 W when accommodating six  
WRU-806A/806B tuner modules  
Power supply for antenna boosters:  
DC 9 V (max. 100 mA)  
Dimensions:  
482 (W) x 44 (H) x 300 (D) mm  
(19 x 1 3/4 x 11 7/8 inches)  
Mass:  
3.6 kg (7 lb 15 oz)

### MB-806A UHF Tuner Base Unit (758 MHz to 862 MHz)

#### Features

- Modular design, 1U height 19-inch rack
- Accommodates up to six WRU-806A/806B for up to six simultaneous channels of operation
- Use of AN-820A antennas and WD-820A or WD-880A antenna divider allows further multi-channel operation
- Balanced XLR output connectors for each tuner and mix output
- RF input attenuator switch (10 dB/0 dB)
- Selectable output level: -58 dBm (for MIC) or -20 dBm (for LINE) at  $\pm 5$  kHz deviation at 1kHz modulation
- Space diversity reception for dependable RF reception
- Auto channel assignment of additional receiver modules for instant programming of interference-free multi-channel operation. Automatically skips unusable channels and assigns clear channels.
- Supplied passive antennas for rear mounting (with provision for front mounting)



(The WRU-806A/806B is not included.)



#### Supplied Accessories

Antenna (2)  
AC power cord (1)

#### Optional Accessories

WRU-806A UHF Synthesized Tuner Unit (62CE7)  
WRU-806A UHF Synthesized Tuner Unit (69CE7)  
WRU-806A UHF Synthesized Tuner Unit (AU)  
AN-820A UHF Antenna

#### Specifications

Receiving frequency range:  
758 MHz to 862 MHz  
Audio output level:  
-20 dBm/-58 dBm at reference deviation  
Audio output connector:  
XLR-3-32 (x 7, balanced)  
Antenna attenuator level:  
0 dB or 10 dB  
Antenna connector:  
BNC-R type (x 2), 50 $\Omega$  (nominal) impedance

#### Power requirements:

AC 220 to 240 V, 60 Hz  
Power consumption:  
30 W when accommodating six  
WRU-806A/806B tuner modules  
Power supply for antenna boosters:  
DC 9 V (max. 100 mA)  
Dimensions:  
482 (W) x 44 (H) x 300 (D) mm  
(19 x 1 3/4 x 11 7/8 inches)  
Mass:  
3.6 kg (7 lb 15 oz)

# Wireless Microphones

## MB-8N Tuner Base Unit (U2)

### Features

●Uses a modular design to accommodate up to four WRU-8N receiver modules. The built-in antenna divider allows up to four MB-8N tuner base units to be daisy-chained to form a 16-channel system. ●Wide system dynamic range: 116 dB (typical) ●PLL (Phase Locked Loop) frequency synthesized system ●Space diversity reception for dependable RF reception ●Advanced control settings from MB-8N front panel ●Headphone monitor jack on MB-8N front panel ●Selectable output level: Mic or Line level ●A D-sub 15-pin connector (unbalanced) for sub audio output ●Computer-based control over a simple Ethernet environment using supplied software ●Auto channel assignment of additional receiver modules for instant programming of interference-free multi-channel operation. Automatically skips unusable channels and assigns open channels. ●AC/DC (auto switch) operation ●Use of WD-880A antenna divider allows further multi-channel operation ●1U high 19-inch rack mountable



(The WRU-8N tuner module is not included.)



### Supplied Accessories

AC power code (1)  
CD-ROM (contains operation instructions and supplied software) (1)

### Optional Accessories

WRU-8N UHF Synthesized Tuner Unit (6264U)  
WRU-8N UHF Synthesized Tuner Unit (6668U)

### Specifications

#### MB-8N Tuner Base Unit

System dynamic range:  
116 dB (typical)  
Frequency response:  
40 Hz to 20 kHz  
Distortion:  
1.0 % or less  
Audio output level:  
-20 dBm (LINE)/-58 dBm (MIC) at reference deviation  
Audio output connector:  
XLR-3-32 type (x 4), balanced  
Sub-audio output connector:  
D-sub 15-pin female, unbalanced  
Antenna attenuator level:  
0 dB, 5 dB, 10 dB or 15 dB  
Antenna connector:  
Inputs: BNC-R type (x 2), 50  $\Omega$  (nominal)  
Outputs (for cascade connection): BNC-R type (x 2), 50  $\Omega$  (nominal)  
Monitor output connector:  
6.3 mm dia. stereo mini jack (x 1)  
Monitor output level:  
12 mW  
Network connector:  
RJ-45 (x 1), 10BASE-T  
Power requirements:  
AC 120 V, 50/60 Hz  
DC 10 to 24 V  
Power available for connected AN-820A antennas:  
9 V, max. 100 mA  
Power consumption:  
50 W when accommodating four WRU-8N tuner units

### Dimensions (W x H x D):

482 x 44 x 300 mm  
(19 x 1 3/4 x 11 7/8 inches)

### Mass:

3.7 kg (8 lb 6 oz)

### Supplied software for computer-based control

#### System requirements:

PC:  
IBM PC/AT compatible  
OS:  
Windows 98SE/Windows 2000/  
Windows Me/Windows NT 4.0 (ST6a)  
Memory capacity:  
128 MB RAM or more  
CPU:  
Intel Pentium 400 MHz or faster  
Display:  
1024 x 768 screen resolution or higher,  
256 color display or higher  
Network interface:  
10/100 BASE-T Network interface card  
Hard disk drive:  
200 MB or more remaining, after MB-8N supplied software and other applications are installed.

## Wireless Microphones

### MB-8N Tuner Base Unit (CED)

#### Features

- Uses a modular design to accommodate up to four WRU-8N receiver modules. The built-in antenna divider allows up to four MB-8N tuner base units to be daisy-chained to form a 16-channel system.
- Wide system dynamic range: 116 dB (typical)
- PLL (Phase Locked Loop) frequency synthesized system
- Space diversity reception for dependable RF reception
- Advanced control settings from MB-8N front panel
- Headphone monitor jack on MB-8N front panel
- Selectable output level: Mic or Line level
- A D-sub 15-pin connector (unbalanced) for sub audio output
- Computer-based control over a simple Ethernet environment using supplied software
- Auto channel assignment of additional receiver modules for instant programming of interference-free multi-channel operation. Automatically skips unusable channels and assigns open channels.
- AC/DC (auto switch) operation
- Use of WD-880A antenna divider allows further multi-channel operation
- 1U high 19-inch rack mountable



(The WRU-8N tuner module is not included.)



#### Supplied Accessories

AC power code (1)  
CD-ROM (contains operation instructions and supplied software) (1)

#### Optional Accessories

WRU-8N UHF Synthesized Tuner Unit (AU)  
WRU-8N UHF Synthesized Tuner Unit (62CE7)  
WRU-8N UHF Synthesized Tuner Unit (67CE7)

#### Specifications

##### MB-8N Tuner Base Unit

System dynamic range:  
116 dB (typical)

Frequency response:  
40 Hz to 20 kHz

Distortion:  
1.0 % or less

Audio output level:  
-20 dBm (LINE)/-58 dBm (MIC) at reference deviation

Audio output connector:  
XLR-3-32 type (x 4), balanced

Sub-audio output connector:  
D-sub 15-pin female, unbalanced

Antenna attenuator level:  
0 dB, 5 dB, 10 dB or 15 dB

Antenna connector:  
Inputs: BNC-R type (x 2), 50  $\Omega$  (nominal)  
Outputs (for cascade connection): BNC-R type (x 2), 50  $\Omega$  (nominal)

Monitor output connector:  
6.3 mm dia. stereo mini jack (x 1)

Monitor output level:  
12 mW

Network connector:  
RJ-45 (x 1), 10BASE-T

Power requirements:  
AC 100 to 240 V, 50/60 Hz  
DC 10 to 24 V

Power available for connected AN-820A antennas:  
9 V, max. 100 mA

#### Power consumption:

0.5 A when accommodating four WRU-8N tuner units

#### Dimensions (W x H x D):

482 x 44 x 300 mm  
(19 x 1 3/4 x 11 7/8 inches)

#### Mass:

3.7 kg (8 lb 6 oz)

#### Supplied software for computer-based control

##### System requirements:

PC:  
IBM PC/AT compatible

OS:  
Windows 98SE/Windows 2000/  
Windows Me/Windows NT 4.0 (ST6a)

Memory capacity:  
128 MB RAM or more

CPU:  
Intel Pentium 400 MHz or faster

Display:  
1024 x 768 screen resolution or higher,  
256 color display or higher

Network interface:  
10/100 BASE-T Network interface card

Hard disk drive:  
200 MB or more remaining, after MB-8N supplied software and other applications are installed.

## Wireless Microphones

### AN-820A UHF Antenna

#### Features

- Built-in RF amplifier (10 dB gain)
- Easy installation on a wall or in a microphone stand with the supplied stand adaptor
- Used in pairs for diversity reception
- LED indication for installation check
- External power supply provided from the MB-806A, WRR-850A/840A/820A or the WD-820A/880A via coaxial cable

#### Applicable Models

MB-806A UHF Tuner Base Unit (758 MHz to 806 MHz)  
MB-806A UHF Tuner Base Unit (758 MHz to 862 MHz)  
SRP-X500P Digital Powered Mixer (120 V)  
SRP-X500P Digital Powered Mixer (230 V)  
SRP-X700P Digital Powered Mixer (120V)  
SRP-X700P Digital Powered Mixer (220/230V)



### WD-820A UHF Antenna Divider (758 MHz to 862 MHz)

#### Features

- Provides diversity output for up to four receivers
- Multi-channel operation by combination with tuners such as the MB-8N and WRU-8N, or MB-806A and WRU-806/806B
- Cascade output can be used for an additional antenna divider or receiver
- Two pair of antenna input connectors for up to four AN-820A antennas to expand the operating area of a wireless microphone system
- DC 9V power supply for the AN-820A UHF antennas via coaxial cable



#### Supplied Accessories

50 ohms BNC terminators (6)

#### Specifications

Frequency range:  
758 MHz to 862 MHz

Channel distribution:

Inputs: 2 pairs

Outputs: 4 pairs

Input/output Impedance:

50  $\Omega$

Cascade output:

1 pair

Power supply for antenna booster (supplied from antenna input connectors):

DC 9 V

Power consumption:

6 W +outlet 300 W max.

#### Dimensions (W x H x D):

482 x 44 x 300 mm  
(19 x 1 3/4 x 11 7/8 inches)

#### Mass:

4.2 kg (9 lb 4 oz)

## Wireless Microphones

### WD-820A UHF Antenna Divider (770 MHz to 806 MHz)

#### Features

- Provides diversity output for up to four receivers
- Multi-channel operation by combination with tuners such as the MB-8N and WRU-8N, or MB-806A and WRU-806/806B
- Cascade output can be used for an additional antenna divider or receiver
- Two pair of antenna input connectors for up to four AN-820A antennas to expand the operating area of a wireless microphone system
- DC 9V power supply for the AN-820A UHF antennas via coaxial cable



#### Supplied Accessories

50 ohms BNC terminators (6)

#### Dimensions (W x H x D):

482 x 44 x 300 mm  
(19 x 1 3/4 x 11 7/8 inches)

#### Specifications

Frequency range:

770 MHz to 806 MHz

Mass:

4.2 kg (9 lb 4 oz)

Channel distribution:

Inputs: 2 pairs

Outputs: 4 pairs

Input/output Impedance:

50  $\Omega$

Cascade output:

1 pair

Power supply for antenna booster (supplied from antenna input connectors):

DC 9 V

Power consumption:

6 W +outlet 300 W max.

### WD-880A UHF Antenna Divider (774 MHz to 798 MHz)

#### Features

- Ideal for complex, multi-channel applications from large scale live music events to TV OBs and large theater productions
- Stable reception minimizing interference and distortion
- Band pass filters divide the spectrum of TV channels into multiple frequency bands which are output from the WD-880A
- Dual inputs and outputs for diversity operation
- Switchable power supply (DC 9 V or 12 V) for the power AN-820A antennas
- LED indications to show the output connection status
- 1U size rack mountable



#### Supplied Accessories

AC power cord (1)

#### Specifications

Channel distribution:

Inputs: 1 pair

Outputs: 6 pair

Input/output impedance:

50  $\Omega$

Frequency range:

774 MHz to 798 MHz

Power Supply for Antenna Booster (supplied from antenna input connectors)

DC 12 V/9 V/OFF switchable

Power Consumption

10 W

Dimensions (W x H x D)

482 x 44 x 300 mm

(19 x 1 3/4 x 11 7/8 inches)

Mass

4.5 kg (9 lb 15 oz)

## Wireless Microphones

### WD-880A UHF Antenna Divider (770 MHz to 806 MHz)

#### Features

- Ideal for complex, multi-channel applications from large scale live music events to TV OBs and large theater productions
- Stable reception minimizing interference and distortion
- Band pass filters divide the spectrum of TV channels into multiple frequency bands which are output from the WD-880A
- Dual inputs and outputs for diversity operation
- Switchable power supply (DC 9 V or 12 V) for the power AN-820A antennas
- LED indications to show the output connection status
- 1U size rack mountable



#### Supplied Accessories

AC power cord (1)

#### Specifications

Channel distribution:

Inputs: 1 pair

Outputs: 6 pair

Input/output impedance:

50  $\Omega$

Frequency range:

770 MHz to 806 MHz

Power Supply for Antenna Booster (supplied from antenna input connectors)

DC 12 V/9 V/OFF switchable

Power Consumption

10 W

Dimensions (W x H x D)

482 x 44 x 300 mm

(19 x 1 3/4 x 11 7/8 inches)

Mass

4.5 kg (9 lb 15 oz)

### CU-E672 Capsule Unit

#### Features

- Hyper cardioid electret condenser microphone capsule
- A wide variety of applications in news-gathering, sports events and interviews
- The supplied windscreen reduces wind noise and popping

#### Applicable Models

WRT-847B UHF Synthesized Transmitter Unit (6264U)

WRT-847B UHF Synthesized Transmitter Unit (6668U)

#### Supplied Accessories

Urethane windscreen (1)

#### Specifications

Directivity:

Uni-directional (hyper cardioid)

Frequency response:

50 Hz to 16 kHz

Max. sound pressure level:

120 dB

Dimensions:

$\phi$ 37 x 172 mm

( $\phi$ 1 1/2 x 6 7/8 inches)

Mass:

150 g (5.3 oz)



## Wireless Microphones

### CU-E700 Capsule Unit

#### Features

- Electret condenser microphone capsule with super cardioid polar pattern
- Smooth frequency response for natural sound re-production
- Suitable for critical vocal and speech applications

#### Applicable Models

WRT-847B UHF Synthesized Transmitter Unit  
(6264U)

WRT-847B UHF Synthesized Transmitter Unit  
(6668U)

#### Specifications

Directivity:

Uni-directional (super cardioid)

Frequency response:

50 Hz to 18 kHz

Max. sound pressure level:

150 dB

Dimensions:

φ51 x 98 mm

(φ2 1/8 x 3 7/8 inches)

Mass:

170 g (6 oz)



### CU-F117 Capsule Unit

#### Features

- Dynamic microphone capsule with omni-directional polar pattern
- Superb rejection for wind noise and popping
- Designed for interview applications

#### Applicable Models

WRT-847B UHF Synthesized Transmitter Unit  
(6264U)

WRT-847B UHF Synthesized Transmitter Unit  
(6668U)

#### Supplied Accessories

Urethane windscreen (1)

#### Specifications

Directivity:

Omni-directional

Frequency response:

50 Hz to 15 kHz

Dimensions:

φ44 x 105 mm

(φ1 3/4 x 4 1/4 inches)

Mass:

170 g (6 oz)



## Wireless Microphones

### CU-F780 Capsule Unit

#### Features

- Dynamic microphone capsule with super cardioid polar pattern
- Uses the same high quality edgewise winding CCAW voice coil that is employed in the acclaimed Sony F-780 wired microphone
- Designed for vocal applications including live music performance

#### Applicable Models

WRT-847B UHF Synthesized Transmitter Unit  
(6264U)

WRT-847B UHF Synthesized Transmitter Unit  
(6668U)

#### Specifications

##### Directivity:

Uni-directional (super cardioid)

##### Frequency response:

50 Hz to 18 kHz

##### Dimensions:

φ51 x 90 mm

(φ2 1/8 x 3 5/8 inches)

##### Mass:

180 g (6.3 oz)



### CU-G780 Capsule Unit

#### Features

- Dynamic microphone capsule with super cardioid polar pattern
- Special design, based on the capsule of F-780 microphone, to cope with high sound pressure level vocals and incorporating outstanding feedback rejection
- Designed for vocal use

#### Applicable Models

WRT-847B UHF Synthesized Transmitter Unit  
(6264U)

WRT-847B UHF Synthesized Transmitter Unit  
(6668U)

#### Specifications

##### Directivity:

Uni-directional (super cardioid)

##### Frequency response:

50 Hz to 20 kHz

##### Dimensions:

φ51 x 90 mm

(φ2 1/8 x 3 5/8 inches)

##### Mass:

180 g (6.3 oz)



Wireless Microphones

EC-1.5CF Microphone Cable

Features

- Fitted with an XLR-3-11 connector and SMC9-4P connector
- Allows a microphone with a 3-pin male XLR output connector to be connected to the WRT-822A/822B/8B bodypack transmitter
- Cable length: 1.5 m (4.9 feet)



URX-M1 UHF Synthesized Tuner Unit (6668U)

Features

- Compact, plug-in diversity tuner module: up to two tuner modules can be installed into the Sony SRP-X700P/X351P presentation mixer, while a maximum of six modules can be installed in the Sony MB-806A tuner base unit
- Suitable for use in PA systems
- Compatible with the UWP Series of bodypack transmitter and handheld microphone
- Operates over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69)
- Incorporates a space diversity reception system and an RF squelch function
- An LCD screen on the tuner provides extensive information: operating channel/frequency, audio-output status and RF-input level



Applicable Models

MB-806A UHF Tuner Base Unit (758 MHz to 806 MHz)

Specifications

Oscillator:

Crystal-controlled PLL synthesizer

Type of reception:

Space diversity

Receiving frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

Antenna:

1/4  $\lambda$  wave length wire

Pilot-tone signal:

32 kHz

RF squelch level:

25 dB $\mu$

System frequency response:

50 Hz to 18 kHz (typical)

Reference deviation:

$\pm 5$  kHz (at 1kHz modulation)

System signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

Indicators

LCD: Operating channel number/frequency, audio-output status, RF-input level

LED: RF-input status

Power requirements:

DC 9.0 V

Dimensions:

56.6 (W) x 25.5 (H) x 121.0 (D) mm  
(2 1/2 x 1 1/16 x 4 7/8 inches)

Mass:

Approx. 150 g (5.3 oz)

\*0 dBV = 1 Vrms

Wireless Microphones

URX-P1 UHF Synthesized Diversity Tuner (6668U)

Features

●Portable tuner for use with the UWP Series of bodypack transmitter or handheld microphone ●Suitable for a wide range of applications, from news gathering and interviews to talk shows and conferences ●Operates over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69) ●Employs a space diversity reception system, an RF squelch function and headphone-monitoring facility ●Angle-adjustable antennas help to eliminate signal dropout and also allow mounting position flexibility when the portable tuner is mounted on a camcorder ●Approximately six hours of continuous operation with two AA-size (LR6) alkaline batteries ●An LCD screen on the tuner provides extensive information: operating channel/frequency, audio-output status, RF-input level, tuner-battery status and accumulated operating time ●Stereo mini jack with monitor-volume control ●Supplied shoe-mount adaptor enables easy mounting on Sony camcorders



Supplied Accessories

- Belt clip (1)
- Microphone stand adaptor (1)
- Screw adaptor (for use in combination with the microphone stand adaptor) (1)
- Shoe-mount adaptor (1)
- Output cable (3-pole mini-plug/XLR-type) (1)

Specifications

- Oscillator:
  - Crystal-controlled PLL synthesizer
- Type of reception:
  - Space diversity
- Receiving frequencies:
  - 782 MHz to 806 MHz (TV channels 66 to 69)
- Antenna:
  - 1/4  $\lambda$  wave length wire
- Pilot-tone signal:
  - 32 kHz
- RF squelch level:
  - 15 dB $\mu$
- System frequency response:
  - 50 Hz to 18 kHz (typical)
- Reference deviation:
  - $\pm 5$  kHz (at 1 kHz modulation)
- System signal-to-noise ratio:
  - 60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)
- Audio output connector:
  - 3.5 mm (5/32 inch) dia., 3-pole mini jack (x 1), unbalanced
- Audio output level:
  - 58 dBm
- Monitor output connector:
  - 3.5 mm (5/32 inch) dia., stereo mini jack (x 1)
- Monitor output level:
  - 5 mW (at 16  $\Omega$ )

Indicators

- LCD: Operating channel number/frequency, audio-output status, RF-input level, tuner battery status, and accumulated operating time
- LED: RF-input status

Power requirements:

- DC 3.0 V
- (Two AA-size alkaline (LR6) batteries)

Battery life:

- Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F)

Dimensions:

- 63.0 (W) x 100.0 (H) x 30.0 (D) mm
- (2 1/2 x 4 x 1 3/16 inches)

Mass:

- Approx. 180 g (6 oz) including batteries

\*0 dBV = 1 Vrms

## Wireless Microphones

# URX-R1 UHF Synthesized Diversity Tuner (6668U)

### Features

- Half 19-inch rack-size, single channel diversity tuner for use with the UWP Series of bodypack transmitter or handheld microphone
- Suitable for use in PA systems
- Operates over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69)
- Employs a space diversity reception system, an RF squelch function and headphone-monitoring facility
- Angle-adjustable antennas help to eliminate signal dropout
- An LCD screen on the tuner provides extensive information: operating channel/frequency, audio-output status and RF-input level
- Equipped with both XLR (balanced) and 1/4-inch phone (unbalanced) type output connectors. The output level on the XLR-type connector can be switched between MIC and LINE level.



### Supplied Accessories

AC/DC adaptor (1)

### Specifications

#### Oscillator:

Crystal-controlled PLL synthesizer

#### Type of reception:

Space diversity

#### Receiving frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

#### Antenna:

1/4  $\lambda$  wave length wire

#### Pilot tone signal:

32 kHz

#### RF squelch level:

25 dB $\mu$

#### Frequency response:

50 Hz to 18 kHz (typical)

#### Reference deviation:

$\pm 5$  kHz (at 1 kHz modulation)

#### Signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

#### Audio output connector:

XLR-3-32 type (balanced) or 1/4-inch phone jack (unbalanced)

#### Audio output level:

XLR-3-32: -28 dBm (LINE level) or -58 dBm (MIC level)  
1/4-inch phone jack: -30 dBm

#### Monitor output connector:

1/4-inch stereo mini jack (1)

#### Monitor output level:

5 mW (at 16  $\Omega$ )

#### Indicators

LCD: Operating channel number/frequency, audio-output status, RF-input level  
LED: RF-input status

#### Power requirements:

DC 9.0 V

#### Dimensions:

212.0 (W) x 44.0 (H) x 209.0 (D) mm  
(8 3/8 x 1 3/4 x 8 1/4 inches)

#### Mass:

Approx. 1.3 kg (2 lb 14 oz)

\*0 dBV = 1 Vrms

Wireless Microphones

UTX-B1C UHF Synthesized Transmitter (6668U)

Features

●Bodypack Transmitter designed for use with the UWP Series tuners ●Suitable for a wide range of applications, from news gathering and interviews to talk shows and conferences ●Supplied with an omni-directional lavalier microphone ●Operates over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69) ●Incorporates selectable RF-output level (5 mW or 30 mW), and adjustable audio-attenuator level ●Approximately six hours of continuous operation with two AA-size (LR6) alkaline batteries ●An LCD screen provides extensive information: operating channel/frequency, attenuator level, RF-output level setting (Low/High), audio-input status, RF-output status, transmitter-battery status and accumulated operating time ●Equipped with a 3.5 mm dia., 3-pole mini-jack input connector with lock mechanism, which accepts the output of any lavalier microphone equipped with a 3.5 mm dia. mini plug, as well as the output of the supplied lavalier microphone



Supplied Accessories

Omni-directional lavalier microphone (1)  
Windscreen (1)  
Microphone holder clip (1)  
Belt clip (1)  
Screw adaptor (for use in combination with the microphone stand adaptor) (1)

Specifications

- Lavalier Microphone

Microphone capsule:  
Omni-directional, electret condenser type

Bodypack Transmitter

Oscillator:  
Crystal-controlled PLL synthesizer  
Type of emission:  
F3E  
Carrier frequencies:  
782 MHz to 806 MHz (TV channels 66 to 69)  
RF power output:  
30 mW or 5 mW (selectable)  
Antenna:  
1/4  $\lambda$  wave length wire  
Pilot tone signal:  
32 kHz  
System frequency response:  
50 Hz to 18 kHz (typical)  
Reference deviation:  
 $\pm 5$  kHz (-60 dBV\*, 1kHz input)  
System signal-to-noise ratio:  
60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)  
Audio attenuator adjustable range:  
0 to 21 dB (in 3 dB steps)  
Audio input level:  
-60 dBV\* (at 0 dB attenuator level)  
Audio input connector:  
3.5 mm (5/32 inch) dia., 3-pole mini jack

Indicators

LCD: Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status, RF-output status, transmitter battery status, and accumulated operating time  
LED: Power status

Power requirements:

DC 3.0 V  
(with two AA-size alkaline (LR6) batteries)

Battery life:

Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output

Dimensions:

63 (W) x 100 (H) x 27 (D) mm  
(2 1/2 x 4 x 1 1/8 inches)

Mass:

Approx. 140 g (4.9 oz) including batteries

\*0 dBV = 1 Vrms

## Wireless Microphones

### UTX-B1S UHF Synthesized Transmitter (6668U)

#### Features

- Bodypack Transmitter designed for use with the UWP Series tuners
- Suitable for a wide range of applications, from news gathering and interviews to talk shows and conferences
- Supplied with a uni-directional lavalier microphone
- Operates over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69)
- Incorporates selectable RF-output level (5 mW or 30 mW), and adjustable audio-attenuator level
- Approximately six hours of continuous operation with two AA-size (LR6) alkaline batteries
- An LCD screen on the transmitter provides extensive information: operating channel/frequency, attenuator level, RF-output level setting (Low/High), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- Equipped with a 3.5 mm dia., 3-pole mini-jack input connector with lock mechanism, which accepts the output of any lavalier microphone equipped with a 3.5 mm dia. mini plug, as well as the output of the supplied lavalier microphone



#### Supplied Accessories

Uni-directional lavalier microphone (1)  
 Windscreen (1)  
 Microphone holder clip (1)  
 Belt clip (1)  
 Screw adaptor (for use in combination with the microphone stand adaptor) (1)

#### Specifications

##### - Lavalier Microphone

Microphone capsule:  
 Uni-directional, electret condenser type

##### Bodypack Transmitter

Oscillator:  
 Crystal-controlled PLL synthesizer

Type of emission:  
 F3E

Carrier frequencies:  
 782 MHz to 806 MHz (TV channels 66 to 69)

RF power output:  
 30 mW or 5 mW (selectable)

Antenna:  
 1/4  $\lambda$  wave length wire

Pilot tone signal:  
 32 kHz

System frequency response:  
 50 Hz to 18 kHz (typical)

Reference deviation:  
 $\pm 5$  kHz (-60 dBV\*, 1kHz input)

System signal-to-noise ratio:  
 60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

Audio attenuator adjustable range:  
 0 to 21 dB (in 3 dB steps)

Audio input level:  
 -60 dBV\* (at 0 dB attenuator level)

Audio input connector:  
 3.5 mm (5/32 inch) dia., 3-pole mini jack

#### Indicators

LCD: Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status, RF-output status, transmitter battery status, and accumulated operating time

LED: Power status

#### Power requirements:

DC 3.0 V  
 (with two AA-size alkaline (LR6) batteries)

#### Battery life:

Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output

#### Dimensions:

63 (W) x 100 (H) x 27 (D) mm  
 (2 1/2 x 4 x 1 1/8 inches)

#### Mass:

Approx. 140 g (4.9 oz) including batteries

\*0 dBV = 1 Vrms

## Wireless Microphones

# UTX-H1 UHF Synthesized Wireless Microphone (6668U)

### Features

- Uni-directional microphone designed for use with the UWP Series tuners
- Suitable for news gathering and for use in PA systems
- Operates over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz (TV channels 66 to 69)
- Incorporates selectable RF-output level (5 mW or 30 mW), and adjustable audio-attenuator level
- Internal antenna design
- Approximately six hours of continuous operation with two AA-size (LR6) alkaline batteries
- An internal LCD screen provides extensive information: operating channel/frequency, attenuator level, RF-output level setting (Low/High), audio-input status, RF-output status, transmitter-battery status and accumulated operating time

### Supplied Accessories

Microphone holder (1)  
Screw adaptor (for use in combination with the microphone holder) (1)

### Specifications

#### Oscillator:

Crystal-controlled PLL synthesizer

#### Type of emission:

F3E

#### Carrier frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

#### RF power output:

30 mW or 5 mW (selectable)

#### Antenna:

1/4  $\lambda$  wave length wire

#### Pilot tone signal:

32 kHz

#### System frequency response:

100 Hz to 18 kHz (typical)

#### Reference deviation:

$\pm 5$  kHz (94 dB SPL\*, 1kHz input)

#### System signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

#### Microphone capsule:

Dynamic capsule (uni-directional)

#### Audio attenuator adjustable range:

0 to 21 dB (in 3 dB steps)

#### Max. input sound pressure level:

151 dB SPL\* (at 21 dB attenuator level)

#### Indicators

LCD: Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status, RF-output status, transmitter battery status, and accumulated operating time  
LED: Power status

#### Power requirements:

DC 3.0 V

(with two AA-size alkaline (LR6) batteries)

#### Battery life:

Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output

#### Dimensions:

52 dia. x 240 mm

(2 1/8 dia. x 9 1/2 inches)

#### Mass:

Approx. 300 g (10.6 oz) including batteries



\*0 dB SPL = 20 $\mu$  Pa.

## Wireless Microphones

# UTX-P1 UHF Synthesized Tuner (6668U)

### Features

- Plug-on transmitter designed for use with the UWP Series tuners
- Operates over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz
- Converts a wired microphone to a wireless microphone via an XLR connection
- Attenuator function allows adjustment of the microphone-input level
- 50 mW RF power output for stable and long-distance transmission
- MIC/LINE input level switchable
- Approximately six hours of continuous operation with two AA-size batteries
- A backlit LCD provides extensive information, including the operating channel number and frequency in MHz, attenuator level, audio-input status, RF-output status, transmitter-battery status, and accumulated operating time



### Specifications

#### Plug-on Transmitter

##### Oscillator

Crystal-controlled PLL synthesizer

##### Type of emission

F3E

##### Carrier frequencies

782 MHz to 806 MHz (TV channels 66 to 69)

##### RF power output

50 mW

##### Pilot-tone signal

32 kHz

##### Frequency response

50 Hz to 18 kHz (typical)

##### Reference deviation

$\pm 10$  kHz (-60 dBV, 1 kHz input)

##### Signal-to-noise ratio

60 dB or more ( $\pm 10$  kHz deviation at 1 kHz modulation, A-weighted)

##### Audio attenuator adjustment range

0 to 21 dB (in 3 dB steps)

##### Audio input level

MIC input position: -60 dBV (at 0 dB attenuator level), LINE input position: +4 dBu

##### Audio input connector

XLR-3-11C type

##### Indicators

LCD: operating channel number/frequency, attenuator level, audio-input status, RF-output status, transmitter battery status, and accumulated operating time  
LED: audio-input status

##### Power requirements

DC 3.0 V (two AA-size batteries)

##### Battery life

Approx. 6 hours with Sony AA-size batteries at 25 °C (77 °F)

##### Dimensions (W x H x D)

44 x 98 x 35 mm (1 3/4 x 3 7/8 x 1 7/16 inches)

##### Mass

Approx. 185 g (6 oz) including batteries

## Wireless Microphones

### UWP-C1 UHF Synthesized Wireless Microphone Package (6668U)

#### Features

- Consists of an omni-directional lavalier microphone, bodypack transmitter and portable tuner
- Suitable for a wide range of applications, from news gathering and interviews to talk shows and conferences
- The transmitter and tuner operate over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz
- The bodypack transmitter incorporates selectable RF-output level (5 mW or 30 mW), and adjustable audio-attenuator level
- The portable tuner employs a space diversity reception system, angle-adjustable antennas, an RF squelch function and headphone-monitoring facility
- Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries on both the transmitter and tuner
- An LCD screen on the transmitter provides extensive information: operating channel/frequency, attenuator level, RF-output level setting (Low/High), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- An LCD screen on the tuner provides extensive information: operating channel/frequency, audio-output status, RF-input level, tuner-battery status and accumulated operating time
- The bodypack transmitter is equipped with a 3.5 mm dia., 3-pole mini-jack input connector with lock mechanism, which accepts the output of any lavalier microphone equipped with a 3.5 mm dia. mini plug, as well as the output of the supplied lavalier microphone



#### Applicable Models

DSR-PD170 DVCAM Camcorder

#### Supplied Accessories

Windscreen (1)  
 Microphone-holder clip (1)  
 Belt clip (for the bodypack transmitter) (1)  
 Belt clip (for the portable tuner) (1)  
 Microphone stand adaptor (for the portable tuner) (1)  
 Screw adaptor (for use in combination with the microphone stand adaptor) (1)  
 Shoe-mount adaptor (1)  
 Output cable (3-pole mini-plug/XLR-type) (1)

Wireless Microphones

Specifications

- Lavalier Microphone

Microphone capsule:

Omni-directional, electret condenser type

Bodypack Transmitter

Oscillator:

Crystal-controlled PLL synthesizer

Type of emission:

F3E

Carrier frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

RF power output:

30 mW or 5 mW (selectable)

Antenna:

1/4 λ wave length wire

Pilot tone signal:

32 kHz

System frequency response:

50 Hz to 18 kHz (typical)

Reference deviation:

±5 kHz (-60 dBV\*, 1kHz input)

System signal-to-noise ratio:

60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)

Audio attenuator adjustable range:

0 to 21 dB (in 3 dB steps)

Audio input level:

-60 dBV\* (at 0 dB attenuator level)

Audio input connector:

3.5 mm (5/32 inch) dia., 3-pole mini jack

Indicators

LCD: Operating channel

number/frequency, attenuator level,

RF-output level (High/Low), audio input

status, RF-output status, transmitter battery

status, and accumulated operating time

LED: Power status

Power requirements:

DC 3.0 V

(with two AA-size alkaline (LR6) batteries)

Battery life:

Approx. 6 hours with Sony AA-size alkaline

(LR6) batteries at 25 °C (77 °F) at 30 mW

output

Dimensions:

63 (W) x 100 (H) x 27 (D) mm

(2 1/2 x 4 x 1 1/8 inches)

Mass:

Approx. 140 g (4.9 oz) including batteries

Portable Tuner

Oscillator:

Crystal-controlled PLL synthesizer

Type of reception:

Space diversity

Receiving frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

Antenna:

1/4 λ wave length wire

Pilot-tone signal:

32 kHz

RF squelch level:

15 dBμ

System frequency response:

50 Hz to 18 kHz (typical)

Reference deviation:

±5 kHz (at 1kHz modulation)

System signal-to-noise ratio:

60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)

Audio output connector:

3.5 mm (5/32 inch) dia., 3-pole mini jack (x 1), unbalanced

Audio output level:

-58 dBm

Monitor output connector:

3.5 mm (5/32 inch) dia., stereo mini jack (x 1)

Monitor output level:

5 mW (at 16 Ω)

Indicators

LCD: Operating channel

number/frequency, audio-output status,

RF-input level, tuner battery status, and

accumulated operating time

LED: RF-input status

Power requirements:

DC 3.0 V

(Two AA-size alkaline (LR6) batteries)

Battery life:

Approx. 6 hours with Sony AA-size alkaline

(LR6) batteries at 25 °C (77 °F)

Dimensions:

63.0 (W) x 100.0 (H) x 30.0 (D) mm

(2 1/2 x 4 x 1 3/16 inches)

Mass:

Approx. 180 g (6 oz) including batteries

\*0 dBV = 1 Vrms

## Wireless Microphones

# UWP-C2 UHF Synthesized Wireless Microphone Package (6668U)

### Features

- Consists of a handheld microphone and portable tuner
- Suitable for news gathering and for use in PA systems
- The microphone and tuner operate over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz
- The uni-directional, dynamic microphone incorporates selectable RF-output level (5 mW or 30 mW), and adjustable audio-attenuator level
- The portable tuner employs a space diversity reception system and angle-adjustable antennas, an RF squelch function and headphone-monitoring facility
- Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries on both the microphone and tuner
- An internal LCD screen on the microphone provides extensive information: operating channel/frequency, attenuator level, RF-output level setting (Low/High), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- An LCD screen on the tuner provides extensive information: operating channel/frequency, audio-output status, RF-input level, tuner-battery status and accumulated operating time



### Supplied Accessories

Shoe-mount adaptor (1)  
 Microphone holder (1)  
 Screw adaptor (for use in combination with the microphone holder) (1)  
 Microphone stand adaptor (for the portable tuner) (1)  
 Screw adaptor (for use in combination with the microphone stand adaptor) (1)  
 Belt clip (1)  
 Output cable (3-pole mini plug/XLR-type) (1)

### Specifications

#### Handheld microphone

Oscillator:  
 Crystal-controlled PLL synthesizer  
 Type of emission:  
 F3E  
 Carrier frequencies:  
 782 MHz to 806 MHz (TV channels 66 to 69)  
 RF power output:  
 30 mW or 5 mW (selectable)  
 Antenna:  
 1/4  $\lambda$  wave length wire  
 Pilot tone signal:  
 32 kHz  
 System frequency response:  
 100 Hz to 18 kHz (typical)  
 Reference deviation:  
 $\pm 5$  kHz (94 dB SPL\*, 1kHz input)  
 System signal-to-noise ratio:  
 60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)  
 Microphone capsule:  
 Dynamic capsule (uni-directional)  
 Audio attenuator adjustable range:  
 0 to 21 dB (in 3 dB steps)  
 Max. input sound pressure level:  
 151 dB SPL\* (at 21 dB attenuator level)

### Indicators

LCD: Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status, RF-output status, transmitter battery status, and accumulated operating time  
 LED: Power status

### Power requirements:

DC 3.0 V  
 (with two AA-size alkaline (LR6) batteries)

### Battery life:

Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output

### Dimensions:

52 dia. x 240 mm  
 (2 1/8 dia. x 9 1/2 inches)

### Mass:

Approx. 300 g (10.6 oz) including batteries

#### Portable Tuner

Oscillator:  
 Crystal-controlled PLL synthesizer

### Type of reception:

Space diversity

### Receiving frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

### Antenna:

1/4  $\lambda$  wave length wire

### Pilot-tone signal:

32 kHz

### RF squelch level:

15 dB $\mu$

### System frequency response:

100 Hz to 18 kHz (typical)

### Reference deviation:

$\pm 5$  kHz (at 1kHz modulation)

### System signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

### Audio output connector:

3.5 mm (5/32 inch) dia., 3-pole mini jack (x 1), unbalanced

### Audio output level:

-58 dBm

### Monitor output connector:

3.5 mm (5/32 inch) dia., stereo mini jack (x 1)

### Monitor output level:

5 mW (at 16  $\Omega$ )

### Indicators

LCD: Operating channel number/frequency, audio-output status, RF-input level, tuner battery status, and accumulated operating time  
 LED: RF-input status

### Power requirements:

DC 3.0 V  
 (Two AA-size alkaline (LR6) batteries)

### Battery life:

Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F)

### Dimensions:

63.0 (W) x 100.0 (H) x 30.0 (D) mm  
 (2 1/2 x 4 x 1 3/16 inches)

### Mass:

Approx. 180 g (6 oz) including batteries

\*0 dB SPL = 20 $\mu$  Pa.

## Wireless Microphones

### UWP-C3 UHF Synthesized Wireless Microphone Package (6668U)

The UWP-C3 package UHF Synthesized Wireless Microphone System is a turnkey package, consisting of a newly developed plug-on transmitter to convert a wired microphone into a wireless microphone, a portable tuner, and accessories required for the use of these components.

#### Features

- The transmitter and tuner operate over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz
- The plug-on transmitter converts a wired microphone to a wireless microphone via an XLR connection
- Attenuator function of the transmitter allows adjustment of the microphone-input level
- 50 mW RF power output for stable and long-distance transmission
- MIC/LINE input level switchable (Plug-on transmitter)
- The portable tuner employs a space diversity reception system and angle-adjustable antennas, an RF squelch function and headphone-monitoring facility
- The tuner is equipped with a stereo mini jack with monitor-volume control
- Approximately six hours of continuous operation with two AA-size batteries on both the transmitter and tuner
- A backlit LCD on the transmitter provides extensive information, including the operating channel number and frequency in MHz, attenuator level, audio-input status, RF-output status, transmitter-battery status, and accumulated operating time
- An LCD screen on the tuner provides extensive information, including the operating channel number and its frequency in MHz, audio-output status, RF-input level, tuner-battery status, and accumulated operating time

#### Supplied Accessories

- Shoe-mount adaptor (1)
- Belt clip (1)
- Output cable (3-pole mini-plug/XLR-type) (1)
- Output cable (3-pole mini-plug/stereo mini-plug) (1)
- Operating instructions (1)



Wireless Microphones

Specifications

Plug-on Transmitter

- Oscillator
  - Crystal-controlled PLL synthesizer
- Type of emission
  - F3E
- Carrier frequencies
  - 782 MHz to 806 MHz (TV channels 66 to 69)
- RF power output
  - 50 mW
- Pilot-tone signal
  - 32 kHz
- Frequency response
  - 50 Hz to 18 kHz (typical)
- Reference deviation
  - ±10 kHz (-60 dBV, 1kHz input)
- Signal-to-noise ratio
  - 60 dB or more (±10 kHz deviation at 1 kHz modulation, A-weighted)
- Audio attenuator adjustment range
  - 0 to 21 dB (in 3 dB steps)
- Audio input level
  - MIC input position: -60 dBV (at 0 dB attenuator level), LINE input position: +4 dBu
- Audio input connector
  - XLR-3-11C type

Indicators

- LCD: operating channel number/frequency, attenuator level, audio-input status, RF-output status, transmitter battery status, and accumulated operating time LED: audio-input status

Power requirements

- DC 3.0 V (two AA-size batteries)

Battery life

- Approx. 6 hours with Sony AA-size batteries at 25 °C (77 °F)

Dimensions (W x H x D)

- 44 x 98 x 35 mm (1 3/4 x 3 7/8 x 1 7/16 inches)

Mass

- Approx. 185 g (6 oz) including batteries

Portable Tuner

- Oscillator
  - Crystal-controlled PLL synthesizer
- Type of reception
  - Space diversity
- Receiving frequencies
  - 782 MHz to 806 MHz (TV channels 66 to 69)
- Antenna
  - 1/4 l wave length wire
- Pilot-tone signal
  - 32 kHz
- RF squelch level
  - 15 dBµ
- Frequency response
  - 50 Hz to 18 kHz (typical)
- Reference deviation
  - ±5 kHz (at 1kHz modulation)
- Signal-to-noise ratio
  - 60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)
- Audio output connector
  - 3.5 mm (5/32 inch) dia., 3-pole mini jack, unbalanced
- Audio output level
  - 58 dBm
- Monitor output connector
  - 3.5 mm (5/32 inch) dia., stereo mini jack
- Monitor output level
  - 5 mW (at 16 Ω)

Indicators

- LCD: operating channel number/frequency, audio-output status, RF-input level, tuner-battery status, and accumulated operating time LED: RF-input status

Power requirements

- DC 3.0 V (two AA-size batteries)

Battery life

- Approx. 6 hours with Sony AA-size batteries at 25 °C (77 °F)

Dimensions (W x H x D)

- 63 x 100 x 30 mm (2 1/2 x 4 x 1 3/16 inches)

Mass

- Approx. 180 g (6 oz) including batteries

## Wireless Microphones

### UWP-S1 UHF Synthesized Wireless Microphone Package (6668U)

#### Features

- Consists of a uni-directional lavalier microphone, bodypack transmitter and half-rack-size tuner
- Suitable for use in PA systems
- The transmitter and half-rack-size tuner operate over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz
- The bodypack transmitter incorporates selectable RF-output level (5 mW or 30 mW), and adjustable audio-attenuator level
- The half-rack-size tuner employs a space diversity reception system, angle-adjustable antennas, an RF squelch function and headphone-monitoring facility
- Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries on the transmitter
- An LCD screen on the transmitter provides extensive information: operating channel/frequency, attenuator level, RF-output level setting (Low/High), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- An LCD screen on the tuner provides extensive information: operating channel/frequency, audio-output status and RF-input level
- The bodypack transmitter is equipped with a 3.5 mm dia, 3-pole mini-jack input connector with a lock mechanism, which accepts the output of any lavalier microphone equipped with a 3.5 mm dia. mini plug, as well as the output of the supplied lavalier microphone
- The half-rack-size tuner is equipped with both XLR (balanced) and 1/4-inch phone (unbalanced) type output connectors. The output level on the XLR-type connector can be switched between MIC and LINE level.



#### Supplied Accessories

Windscreen (1)  
Microphone-holder clip (1)  
Belt clip (1)  
AC/DC adaptor (1)

#### Specifications

##### Lavalier Microphone

Microphone capsule:  
Uni-directional, electret condenser type

##### Bodypack Transmitter

Oscillator:  
Crystal-controlled PLL synthesizer  
Type of emission:  
F3E  
Carrier frequencies:  
782 MHz to 806 MHz (TV channels 66 to 69)  
RF power output:  
30 mW or 5 mW (selectable)  
Antenna:  
1/4  $\lambda$  wave length wire  
Pilot tone signal:  
32 kHz  
Frequency response:  
50 Hz to 18 kHz (typical)  
Reference deviation:  
 $\pm 5$  kHz (-60 dBV\*, 1kHz input)  
Signal-to-noise ratio:  
60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)  
Audio attenuator adjustable range:  
0 to 21 dB (in 3 dB steps)  
Audio input level:  
-60 dBV\* (at 0 dB attenuator level)

#### Audio input connector:

3.5 mm (5/32 inch) dia., 3-pole mini jack

#### Indicators

LCD: Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status, RF-output status, transmitter battery status, and accumulated operating time  
LED: Power status

#### Power requirements:

DC 3.0 V  
(with two AA-size alkaline (LR6) batteries)

#### Battery life:

Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output

#### Dimensions:

63 (W) x 100 (H) x 27 (D) mm  
(2 1/2 x 4 x 1 1/8 inches)

#### Mass:

Approx. 140 g (4.9 oz) including batteries

##### Half 19-inch Rack-Size Tuner

#### Oscillator:

Crystal-controlled PLL synthesizer

#### Type of reception:

Space diversity

#### Receiving frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

#### Antenna:

1/4  $\lambda$  wave length wire

#### Pilot tone signal:

32 kHz

#### RF squelch level:

25 dB $\mu$

#### Frequency response:

50 Hz to 18 kHz (typical)

#### Reference deviation:

$\pm 5$  kHz (at 1kHz modulation)

#### Signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

#### Audio output connector:

XLR-3-32 type (balanced) or 1/4-inch phone jack (unbalanced)

#### Audio output level:

XLR-3-32: -28 dBm (LINE level) or -58 dBm (MIC level)  
1/4-inch phone jack: -30 dBm

#### Monitor output connector:

1/4-inch stereo mini jack (1)

#### Monitor output level:

5 mW (at 16  $\Omega$ )

#### Indicators

LCD: Operating channel number/frequency, audio-output status, RF-input level  
LED: RF-input status

#### Power requirements:

DC 9.0 V

#### Dimensions:

212.0 (W) x 44.0 (H) x 209.0 (D) mm  
(8 3/8 x 1 3/4 x 8 1/4 inches)

#### Mass:

Approx. 1.3 kg (2 lb 14 oz)

\*0 dBV = 1 Vrms

## Wireless Microphones

# UWP-S2 UHF Synthesized Wireless Microphone Package (6668U)

### Features

- Consists of a handheld microphone and half-rack-size tuner
- Suitable for use in PA systems
- The microphone and half-rack-size tuner operate over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz
- The uni-directional, dynamic microphone incorporates selectable RF-output level (5 mW or 30 mW), and adjustable audio-attenuator level
- The half-rack-size tuner employs a space diversity reception system, angle-adjustable antennas, an RF squelch function and headphone-monitoring facility
- Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries on the microphone
- An internal LCD screen on the microphone provides extensive information: operating channel/frequency, attenuator level, RF-output level setting (Low/High), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- An LCD screen on the tuner provides extensive information: operating channel/frequency, audio-output status and RF-input level
- The half-rack-size tuner is equipped with both XLR (balanced) and 1/4-inch phone (unbalanced) type output connectors. The output level on the XLR-type connector can be switched between MIC and LINE level.



### Supplied Accessories

Microphone holder (1)  
Screw adaptor (for use in combination with the microphone holder) (1)  
AC/DC adaptor (1)

### Specifications

#### Handheld Microphone

Oscillator:  
Crystal-controlled PLL synthesizer

Type of emission:  
F3E

Carrier frequencies:  
782 MHz to 806 MHz (TV channels 66 to 69)

RF power output:  
30 mW or 5 mW (selectable)

Antenna:  
1/4  $\lambda$  wave length wire

Pilot tone signal:  
32 kHz

System frequency response:  
100 Hz to 18 kHz (typical)

Reference deviation:  
 $\pm 5$  kHz (94 dB SPL\*, 1kHz input)

System signal-to-noise ratio:  
60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

Microphone capsule:  
Dynamic capsule (uni-directional)

Audio attenuator adjustable range:  
0 to 21 dB (in 3 dB steps)

Max. input sound pressure level:  
151 dB SPL\* (at 21 dB attenuator level)

### Indicators

LCD: Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status, RF-output status, transmitter battery status, and accumulated operating time

LED: Power status

### Power requirements:

DC 3.0 V  
(with two AA-size alkaline (LR6) batteries)

### Battery life:

Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output

### Dimensions:

52 dia. x 240 mm  
(2 1/8 dia. x 9 1/2 inches)

### Mass:

Approx. 300 g (10.6 oz) including batteries

#### Half 19-inch Rack-Size Tuner

### Oscillator:

Crystal-controlled PLL synthesizer

### Type of reception:

Space diversity

### Receiving frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

### Antenna:

1/4  $\lambda$  wave length wire

### Pilot tone signal:

32 kHz

### RF squelch level:

25 dB $\mu$

### System frequency response:

100 Hz to 18 kHz (typical)

### Reference deviation:

$\pm 5$  kHz (at 1kHz modulation)

### System signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

### Audio output connector:

XLR-3-32 type (balanced) or 1/4-inch phone jack (unbalanced)

### Audio output level:

XLR-3-32: -28 dBm (LINE level) or -58 dBm (MIC level)

1/4-inch phone jack: -30 dBm

### Monitor output connector:

1/4-inch stereo mini jack (1)

### Monitor output level:

5 mW (at 16  $\Omega$ )

### Indicators

LCD: Operating channel number/frequency, audio-output status, RF-input level

LED: RF-input status

### Power requirements:

DC 9.0 V

### Dimensions:

212.0 (W) x 44.0 (H) x 209.0 (D) mm  
(8 3/8 x 1 3/4 x 8 1/4 inches)

### Mass:

Approx. 1.3 kg (2 lb 14 oz)

\*0 dB SPL = 20 $\mu$  Pa.

## Wireless Microphones

### UWP-X1 UHF Synthesized Wireless Microphone Package (6668U)

#### Features

- Consists of a uni-directional lavalier microphone, bodypack transmitter and tuner module
- Suitable for use in PA systems. Tuner modules can be installed into the SRP-X700P/X351P presentation mixer (max. two units), and a maximum of six modules can be installed in the MB-806A tuner base unit.
- The transmitter and tuner module operate over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz
- The bodypack transmitter incorporates selectable RF-output level (5 mW or 30 mW), and adjustable audio-attenuator level
- The tuner module incorporates a space diversity reception system and an RF squelch function
- Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries on the transmitter
- An LCD screen on the transmitter provides extensive information: operating channel/frequency, attenuator level, RF-output level setting (Low/High), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- An LCD screen on the tuner provides extensive information: operating channel/frequency, audio-output status and RF-input level
- The bodypack transmitter is equipped with a 3.5 mm dia., 3-pole mini-jack input connector with a lock mechanism, which accepts the output of any lavalier microphone equipped with a 3.5 mm dia. mini plug, as well as the output of the supplied lavalier microphone



#### Supplied Accessories

Windscreen (1)  
Microphone-holder clip (1)  
Belt clip (1)

#### Specifications

##### Lavalier Microphone

Microphone capsule:

Uni-directional, electret condenser type

##### Bodypack Transmitter

Oscillator:

Crystal-controlled PLL synthesizer

Type of emission:

F3E

Carrier frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

RF power output:

30 mW or 5 mW (selectable)

Antenna:

1/4  $\lambda$  wave length wire

Pilot tone signal:

32 kHz

System frequency response:

50 Hz to 18 kHz (typical)

Reference deviation:

$\pm 5$  kHz (-60 dBV\*, 1 kHz input)

System signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

Audio attenuator adjustable range:

0 to 21 dB (in 3 dB steps)

Audio input level:

-60 dBV\* (at 0 dB attenuator level)

Audio input connector:

3.5 mm (5/32 inch) dia., 3-pole mini jack

#### Indicators

LCD: Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status, RF-output status, transmitter battery status, and accumulated operating time

LED: Power status

Power requirements:

DC 3.0 V

(with two AA-size alkaline (LR6) batteries)

Battery life:

Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output

Dimensions:

63 (W) x 100 (H) x 27 (D) mm  
(2 1/2 x 4 x 1 1/8 inches)

Mass:

Approx. 140 g (4.9 oz) including batteries

##### Tuner Module

Oscillator:

Crystal-controlled PLL synthesizer

Type of reception:

Space diversity

Receiving frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

Antenna:

1/4  $\lambda$  wave length wire

Pilot-tone signal:

32 kHz

RF squelch level:

25 dB $\mu$

System frequency response:

50 Hz to 18 kHz (typical)

#### Reference deviation:

$\pm 5$  kHz (at 1 kHz modulation)

System signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

Indicators

LCD: Operating channel number/frequency, audio-output status, RF-input level

LED: RF-input status

Power requirements:

DC 9.0 V

Dimensions:

56.6 (W) x 25.5 (H) x 121.0 (D) mm  
(2 1/2 x 1 1/16 x 4 7/8 inches)

Mass:

Approx. 150 g (5.3 oz)

\*0 dBV = 1 Vrms

## Wireless Microphones

### UWP-X2 UHF Synthesized Wireless Microphone Package (6668U)

#### Features

- Consists of a handheld microphone and tuner module
- Suitable for use in PA systems. Tuner modules can be installed into the SRP-X700P/X351P presentation mixer (max. two units), and a maximum of six modules can be installed in the MB-806A tuner base unit.
- The microphone and tuner module operate over a wide 24 MHz frequency band within the range of 782 MHz to 806 MHz
- The uni-directional, dynamic microphone incorporates selectable RF-output level (5 mW or 30 mW), and adjustable audio-attenuator level
- The tuner module incorporates a space diversity reception system and an RF squelch function
- Approx. six hours of continuous operation with two AA-size (LR6) alkaline batteries on the microphone
- An internal LCD screen on the microphone provides extensive information: operating channel/frequency, attenuator level, RF-output level setting (Low/High), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- An LCD screen on the tuner provides extensive information: operating channel/frequency, audio-output status and RF-input level



#### Supplied Accessories

- Microphone holder (1)
- Screw adaptor (for use in combination with the microphone holder) (1)

#### Specifications

##### Handheld Microphone

##### Oscillator:

Crystal-controlled PLL synthesizer

##### Type of emission:

F3E

##### Carrier frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

##### RF power output:

30 mW or 5 mW (selectable)

##### Antenna:

1/4  $\lambda$  wave length wire

##### Pilot tone signal:

32 kHz

##### System frequency response:

100 Hz to 18 kHz (typical)

##### Reference deviation:

$\pm 5$  kHz (94 dB SPL\*, 1kHz input)

##### System signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

##### Microphone capsule:

Dynamic capsule (uni-directional)

##### Audio attenuator adjustable range:

0 to 21 dB (in 3 dB steps)

##### Max. input sound pressure level:

151 dB SPL\* (at 21 dB attenuator level)

##### Indicators

LCD: Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status, RF-output status, transmitter battery status, and accumulated operating time  
LED: Power status

##### Power requirements:

DC 3.0 V

(with two AA-size alkaline (LR6) batteries)

##### Battery life:

Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output

##### Dimensions:

52 dia. x 240 mm  
(2 1/8 dia. x 9 1/2 inches)

##### Mass:

Approx. 300 g (10.6 oz) including batteries

##### Tuner Module

##### Oscillator:

Crystal-controlled PLL synthesizer

##### Type of reception:

Space diversity

##### Receiving frequencies:

782 MHz to 806 MHz (TV channels 66 to 69)

##### Antenna:

1/4  $\lambda$  wave length wire

##### Pilot-tone signal:

32 kHz

##### RF squelch level:

25 dB $\mu$

##### System frequency response:

100 Hz to 18 kHz (typical)

##### Reference deviation:

$\pm 5$  kHz (at 1kHz modulation)

##### System signal-to-noise ratio:

60 dB or more ( $\pm 5$  kHz deviation at 1 kHz modulation, A-weighted)

##### Indicators

LCD: Operating channel number/frequency, audio-output status, RF-input level  
LED: RF-input status

##### Power requirements:

DC 9.0 V

##### Dimensions:

56.6 (W) x 25.5 (H) x 121.0 (D) mm  
(2 1/2 x 1 1/16 x 4 7/8 inches)

##### Mass:

Approx. 150 g (5.3 oz)

\*0 dBV = 1 Vrms

Wireless Microphones



Wireless Microphones

Recording Media

BCT-SR tapes . . . . . 792  
BCT-HD tapes . . . . . 792  
BCT-D tapes . . . . . 793  
BCT-MX tapes . . . . . 794  
BCT-SXA tapes . . . . . 795  
BCT-HD12CL tapes . . . . . 796  
BCT-D12CL tape . . . . . 796  
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PDV-ME tapes . . . . . 797  
PDV-MEM tapes . . . . . 798  
PDV-N tapes . . . . . 798  
PDV-CL tapes . . . . . 799  
PHDVM-63DM tape . . . . . 799  
PFD23 Disc . . . . . 800  
MSH . . . . . 800  
MSA-A . . . . . 801  
MSAC-FD . . . . . 801  
MSAC-PC . . . . . 801  
MSAC-US . . . . . 802

Recording Media

BCT-SR tapes BCT-SR Series HDCAM SR Tapes

BCT-6SR  
BCT-33SR  
BCT-40SR  
BCT-64SRL  
BCT-94SRL  
BCT-124SRL



**Applicable Models**  
SRW-1 HDCAM-SR Portable VTR  
SRW-5000 HDCAM-SR VTR  
SRW-5500 HDCAM-SR VTR

**Specifications**

**BCT-6SR**  
Tape length m (ft)  
52 (171)  
Playing time (min)  
6  
Mass g (lb)  
263 (0.58)  
**BCT-33SR**  
Tape length m (ft)  
243 (797)  
Playing time (min)  
33

Mass g (lb)  
305 (0.67)  
**BCT-40SR**  
Tape length m (ft)  
293 (961)  
Playing time (min)  
40  
Mass g (lb)  
314 (0.69)  
**BCT-64SRL**  
Tape length m (ft)  
469 (1539)  
Playing time (min)  
64  
Mass g (lb)  
677 (1.49)  
**BCT-94SRL**  
Tape length m (ft)  
681 (2234)

Playing time (min)  
94  
Mass g (lb)  
724 (1.60)  
**BCT-124SRL**  
Tape length m (ft)  
893 (2930)  
Playing time (min)  
124  
Mass g (lb)  
767 (1.69)

BCT-HD tapes BCT-HD series HDCAM tapes

BCT-22HD  
BCT-40HD  
BCT-64HDL  
BCT-124HDL



**Applicable Models**  
HDW-2000 HDCAM VTR  
HDW-D2000 HDCAM Recorder  
HDW-F500 HDCAM Digital Videocassette Recorder  
HDW-F900H HDCAM Camcorder  
HDW-M2000 HDCAM VTR

HDW-M2000P HDCAM VTR  
HDW-M2100 HDCAM Player  
HDW-M2100P HDCAM Player  
HDW-S2000 HDCAM Recorder  
HDW-S2000P HDCAM Recorder  
HDW-S280 HDCAM Compact Recorder  
SRW-5500 HDCAM-SR VTR

Recording Media

BCT-D tapes BCT-D Series Digital BETACAM Tapes

- BCT-D6
- BCT-D12
- BCT-D22
- BCT-D32
- BCT-D40
- BCT-D34L
- BCT-D64L
- BCT-D94L
- BCT-D124L



Applicable Models

- DVW-2000 Digital Betacam Recorder
- DVW-2000P Digital Betacam Recorder
- DVW-970 Digital Betacam Camcorder
- DVW-970P Digital Betacam Camcorder
- DVW-M2000 Digital Betacam Recorder
- DVW-M2000P Digital Betacam Recorder

Specifications

BCT-D6

- Tape length:  
43 m (141 ft)
- Playing time:  
6 min
- Mass:  
260 g (0.57 lb)

BCT-D12

- Tape length:  
78 m (256 ft)
- Playing time:  
12 min
- Mass:  
270 g (0.59 lb)

BCT-D22

- Tape length:  
136 m (446 ft)
- Playing time:  
22 min
- Mass:  
277 g (0.61 lb)

BCT-D32

- Tape length:  
195 m (640 ft)
- Playing time:  
32 min
- Mass:  
295 g (0.65 lb)

BCT-D40

- Tape length:  
241 m (791 ft)
- Playing time:  
40 min
- Mass:  
308 g (0.68 lb)

BCT-D34L

- Tape length:  
206 m (676 ft)
- Playing time:  
34 min
- Mass:  
630 g (1.39 lb)

BCT-D64L

- Tape length:  
382 m (1253 ft)
- Playing time:  
64 min
- Mass:  
677 g (1.49 lb)

BCT-D94L

- Tape length:  
557 m (1827 ft)
- Playing time:  
94 min
- Mass:  
728 g (1.60 lb)

BCT-D124L

- Tape length:  
732 m (2402 ft)
- Playing time:  
124 min
- Mass:  
780 g (1.72 lb)

\*Mass: with case

Recording Media

BCT-MX tapes BCT-MX Series MPEG IMX Tapes

BCT-6MX  
BCT-12MX  
BCT-22MX  
BCT-32MX  
BCT-60MX  
BCT-64MXL  
BCT-94MXL  
BCT-124MXL  
BCT-184MXL



Applicable Models

MSW-2000 MPEG IMX Recorder  
MSW-970 MPEG IMX camcorder  
MSW-970P MPEG IMX camcorder PAL model  
MSW-A2000 MPEG IMX Recorder (/1 model)  
MSW-A2000P MPEG IMX Recorder (/1 model)  
MSW-M2000 MPEG IMX Recorder (/1 model)  
MSW-M2000E MPEG IMX Recorder (with  
Network Interface Board installed)  
MSW-M2000EP MPEG IMX Recorder (with  
Network Interface Board installed)  
MSW-M2000P MPEG IMX Recorder (/1  
model)  
MSW-M2100 MPEG IMX Player (/1 model)  
MSW-M2100E MPEG IMX Player (with  
Network Interface Board installed)  
MSW-M2100EP MPEG IMX Player (with  
Network Interface Board installed)  
MSW-M2100P MPEG IMX Player (/1 model)

Specifications

BCT-6MX

Tape length m (ft)  
30 (98)  
Playing time (min)  
6  
Mass g (lb)  
215 (0.47)

BCT-12MX

Tape length m (ft)  
53 (174)  
Playing time (min)  
12  
Mass g (lb)  
221 (0.49)

BCT-22MX

Tape length m (ft)  
92 (302)  
Playing time (min)  
22  
Mass g (lb)  
231 (0.51)

BCT-32MX

Tape length m (ft)  
131 (430)  
Playing time (min)  
32  
Mass g (lb)  
242 (0.53)

BCT-60MX

Tape length m (ft)  
139 (456)  
Playing time (min)  
60  
Mass g (lb)  
270 (0.6)

BCT-64MXL

Tape length m (ft)  
260 (852)  
Playing time (min)  
64  
Mass g (lb)  
601 (1.32)

BCT-94MXL

Tape length m (ft)  
376 (1233)  
Playing time (min)  
94  
Mass g (lb)  
632 (1.39)

BCT-124MXL

Tape length m (ft)  
493 (1616)  
Playing time (min)  
124  
Mass g (lb)  
663 (1.46)

BCT-184MXL

Tape length m (ft)  
725 (2377)  
Playing time (min)  
184  
Mass g (lb)  
725 (1.60)

Recording Media

BCT-SXA tapes Betacam SX Tapes

BCT-12SXA  
BCT-22SXA  
BCT-32SXA  
BCT-62SXA  
BCT-64SXLA  
BCT-94SXLA  
BCT-124SXLA  
BCT-184SXLA  
BCT-194SXLA

Applicable Models

DNW-7 Batacam SX Camcorder  
DNW-7P Batacam SX Camcorder  
DNW-90WS Batacam SX Camcorder  
DNW-90WSP Batacam SX Camcorder  
DNW-9WS Batacam SX Camcorder  
DNW-9WSP Batacam SX Camcorder  
DNW-A25WS Batacam SX Portable Recorder  
DNW-A25WSP Batacam SX Portable Recorder  
DNW-A28 Batacam SX Recorder  
DNW-A28P Batacam SX Recorder  
DNW-A65 Batacam SX Player  
DNW-A65P Batacam SX Player  
DNW-A75 Batacam SX Recorder  
DNW-A75P Batacam SX Recorder

Specifications

BCT-12SXA  
Tape length:  
52 m (171 ft)  
Playing time:  
12 min  
Mass:  
225 g (0.50 lb)

BCT-22SXA  
Tape length:  
88 m (289 ft)  
Playing time:  
22 min  
Mass:  
230 g (0.51 lb)

BCT-32SXA  
Tape length:  
124 m (407 ft)  
Playing time:  
32 min  
Mass:  
240 g (0.53 lb)

BCT-62SXA  
Tape length:  
231 m (758 ft)  
Playing time:  
62 min  
Mass:  
270 g (0.59 lb)

BCT-64SXLA  
Tape length:  
241 m (791 ft)  
Playing time:  
64 min  
Mass:  
600 g (1.32 lb)

BCT-94SXLA  
Tape length:  
349 m (1145 ft)  
Playing time:  
94 min

Mass:  
630 g (1.39 lb)  
BCT-124SXLA  
Tape length:  
456 m (1496 ft)  
Playing time:  
124 min  
Mass:  
655 g (1.44 lb)  
BCT-184SXLA  
Tape length:  
671 m (2201 ft)  
Playing time:  
184 min  
Mass:  
710 g (1.56 lb)  
BCT-194SXLA  
Tape length:  
707 m (2320 ft)  
Playing time:  
194 min  
Mass:  
720 g (1.59 lb)



## Recording Media

# BCT-HD12CL tapes Head Cleaning Videocassette Tapes for HDCAM VTRs

### BCT-HD12CL

#### Applicable Models

HDW-2000 HDCAM VTR  
 HDW-D2000 HDCAM Recorder  
 HDW-F500 HDCAM Digital Videocassette Recorder  
 HDW-M2000 HDCAM VTR  
 HDW-M2000P HDCAM VTR  
 HDW-M2100 HDCAM Player  
 HDW-M2100P HDCAM Player  
 HDW-S2000 HDCAM Recorder  
 HDW-S2000P HDCAM Recorder  
 HDW-S280 HDCAM Compact Recorder  
 SRPC-1 HD Video Processor  
 SRW-1 HDCAM-SR Portable VTR  
 SRW-5000 HDCAM-SR VTR  
 SRW-5500 HDCAM-SR VTR



# BCT-D12CL tape Head Cleaning Tape

Head cleaning tape for Digital BETACAM VTRs

### BCT-D12CL



# BCT-5CLN tape Head Cleaning Tape

Head cleaning tape for Betacam, Betacam SP and Betacam SX VTRs

### BCT-5CLN



Recording Media

PDV-ME tapes Digital Videocassette Tapes

- PDVM-12ME/22ME/32ME/40ME (Mini size)
- PDV-34ME/64ME/94ME/124ME/184ME (Standard size)
- PDVM-12ME
- PDVM-22ME
- PDVM-32ME
- PDVM-40ME
- PDV-34ME
- PDV-64ME
- PDV-94ME
- PDV-124ME
- PDV-184ME



Features

- For DVCAM DSR series VTRs
- High output and high reliability due to pure cobalt advanced evaporated coating with DLC (Diamond Like Carbon) protective layer
- Built-in 16 kbit IC memory

Applicable Models

- DSR-1500A Editing Recorder
- DSR-1500AP Editing Recorder
- DSR-1600A DVCAM Editing Player
- DSR-1600AP DVCAM Editing Player
- DSR-1800A DVCAM Editing Recorder
- DSR-1800AP DVCAM Editing Recorder
- DSR-2000A DVCAM Editing Recorder
- DSR-2000AP DVCAM Editing Recorder
- DSR-PD170 DVCAM Camcorder
- DSR-PD170P DVCAM Camcorder

Specifications

Tape length(m/feet)

- PDVM-12ME: 24/79
- PDVM-22ME: 41/135
- PDVM-32ME: 58/190
- PDVM-40ME: 71/233
- PDV-34ME: 61/200
- PDV-64ME: 112/367
- PDV-94ME: 163/535
- PDV-124ME: 214/702
- PDV-184ME: 315/1033

Recording/Playback time (min)

- PDVM-12ME: 12
- PDVM-22ME: 22
- PDVM-32ME: 32
- PDVM-40ME: 40
- PDV-34ME: 34
- PDV-64ME: 64
- PDV-94ME: 94
- PDV-124ME: 124
- PDV-184ME: 184

Mass\* (g/lb.)

- PDVM-12ME: 61/0.134
- PDVM-22ME: 62/0.137
- PDVM-32ME: 63/0.139
- PDVM-40ME: 64/0.141
- PDV-34ME: 124/0.273
- PDV-64ME: 128/0.282
- PDV-94ME: 132/0.291
- PDV-124ME: 135/0.298
- PDV-184ME: 142/0.313

With case

## Recording Media

### PDV-MEM tapes Digital Videocassette Tapes (Master Tape)

PDVM-32MEM/40MEM (Mini size)

PDV-64MEM/124MEM/184MEM (Standard size)

PDVM-32MEM

PDVM-40MEM

PDV-64MEM

PDV-124MEM

PDV-184MEM



#### Features

- For DVCAM DSR series VTRs ●Offers high output, lower noise, higher C/N characteristics and extremely low error rates due to Hyper Evaticle II Magnetic Particles
- Ensures superior quality even at a four times high-speed transfer mode ●Built-in 16 kbit IC memory

#### Applicable Models

DSR-1500A Editing Recorder  
DSR-1500AP Editing Recorder  
DSR-1600A DVCAM Editing Player  
DSR-1600AP DVCAM Editing Player  
DSR-1800A DVCAM Editing Recorder  
DSR-1800AP DVCAM Editing Recorder  
DSR-2000A DVCAM Editing Recorder  
DSR-2000AP DVCAM Editing Recorder

#### Recording/Playback time (min)

PDVM-32MEM: 32  
PDVM-40MEM: 40  
PDV-64ME: 64  
PDV-124ME: 124  
PDV-184ME: 184

#### Mass\* (g/lb.)

PDVM-32MEM: 63/0.139  
PDVM-40MEM: 64/0.141  
PDV-64ME: 128/0.282  
PDV-124ME: 135/0.298  
PDV-184ME: 142/0.313

#### Specifications

Tape length(m/feet)

PDVM-32MEM: 58/190  
PDVM-40MEM: 71/233  
PDV-64ME: 112/367  
PDV-124ME: 214/702  
PDV-184ME: 315/1033

#### With case

### PDV-N tapes Digital Videocassette Tapes (Non IC type)

PDVM-32N/40N (Mini size) PDV-64N/124N/184N (Standard size)

PDVM-32N

PDVM-40N

PDV-64N

PDV-124N

PDV-184N

#### Features

- For DVCAM DSR Series VTRs ●High output and high reliability due to pure cobalt advanced evaporated coating with DLC (Diamond Like Carbon) protective layer ●Without IC Memory

#### Applicable Models

DSR-1500A Editing Recorder  
DSR-1500AP Editing Recorder  
DSR-1600A DVCAM Editing Player  
DSR-1600AP DVCAM Editing Player  
DSR-1800A DVCAM Editing Recorder  
DSR-1800AP DVCAM Editing Recorder  
DSR-2000A DVCAM Editing Recorder  
DSR-2000AP DVCAM Editing Recorder

#### Recording/Playback time (min)

PDVM-32MEM: 32  
PDVM-40MEM: 40  
PDV-64ME: 64  
PDV-124ME: 124  
PDV-184ME: 184

#### Mass\* (g/lb.)

PDVM-32MEM: 63/0.139  
PDVM-40MEM: 64/0.141  
PDV-64ME: 128/0.282  
PDV-124ME: 135/0.298  
PDV-184ME: 142/0.313

#### Specifications

Tape length(m/feet)

PDVM-32MEM: 58/190  
PDVM-40MEM: 71/233  
PDV-64ME: 112/367  
PDV-124ME: 214/702  
PDV-184ME: 315/1033

#### With case

## Recording Media

### PDV-CL tapes Video Head Cleaning Cassette Tapes (for DVCAM)

PDVM-12CL(Mini size) PDV-12CL(Standard size)

PDV-12CL

PDVM-12CL

#### Features

- For DVCAM DSR Series VTRs

#### Applicable Models

DSR-1500A Editing Recorder

DSR-1500AP Editing Recorder

DSR-1600A DVCAM Editing Player

DSR-1600AP DVCAM Editing Player

DSR-1800A DVCAM Editing Recorder

DSR-1800AP DVCAM Editing Recorder

DSR-2000A DVCAM Editing Recorder

DSR-2000AP DVCAM Editing Recorder



### PHDVM-63DM tape DigitalMaster Mini Cassette Tape

Professional mini cassette tape compatible with HDV,  
DVCAM and DV formats

PHDVM-63DM

#### Applicable Models

HVR-Z1N HDV 1080i Camcorder

HVR-Z1P HDV 1080i Camcorder



Recording Media

## Recording Media

# PFD23 Disc Professional Disc

Professional optical disc for XDCAM products  
PFD23

### Features

●Large disc capacity of 23-GB, allowing long recordings of MPEG IMX and DVCAM signals ●Uses the state-of-the-art blue laser technology ●High transfer rate of 72 Mb/s from a single optical head (144 Mb/s on a dual head deck) ●Specially designed, dust and shock-proof cartridge ●Highly reliable and durable medium ●Can be re-used more than 1000 times



### Applicable Models

PDW-1500 XDCAM Compact Deck  
(Recording and Playback)  
PDW-510 XDCAM Camcorder (DVCAM  
Recording)  
PDW-510P XDCAM Camcorder (DVCAM  
Recording)  
PDW-530 XDCAM Camcorder (MPEG  
IMX/DVCAM Recording)  
PDW-530P XDCAM Camcorder (MPEG  
IMX/DVCAM Recording)  
PDW-D1 XDCAM Drive Unit  
PDW-V1 XDCAM Mobile Deck (Playback and  
File Recording)

Data transfer (writing) rate:  
72 Mb/s (per optical head)  
Disc diameter:  
120 mm (4 5/8 inches)  
Cartridge dimensions:  
129 (W) x 131 (H) x 9 (D) mm  
(5 1/8 x 5 1/4 x 3/8 inches)  
Mass:  
90 g (3 oz)  
Recording format:  
Phase change recording

### Specifications

Storage capacity:  
23.3 GB  
Laser wavelength:  
405 nm (blue-violet)

# MSH “Memory Stick” IC Memory Media

MSH-32  
MSH-64  
MSH-128

### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30P 3-chip CCD Portable Color  
Camera  
BVP-E30WS 3-chip CCD Portable Color  
Camera  
BVP-E30WSP 3-chip CCD Portable Color  
Camera  
DVW-2000 Digital Betacam Recorder  
DVW-2000P Digital Betacam Recorder  
DVW-970 Digital Betacam Camcorder  
DVW-970P Digital Betacam Camcorder  
DVW-M2000 Digital Betacam Recorder  
DVW-M2000P Digital Betacam Recorder  
HDW-730S HDCAM Camcorder  
HDW-750 HDCAM Camcorder  
HDW-750P HDCAM Camcorder  
MSW-970 MPEG IMX camcorder  
MSW-970P MPEG IMX camcorder PAL model  
MSW-A2000 MPEG IMX Recorder (/1 model)  
MSW-A2000P MPEG IMX Recorder (/1 model)  
MSW-M2000 MPEG IMX Recorder (/1 model)  
MSW-M2000E MPEG IMX Recorder (with  
Network Interface Board installed)  
MSW-M2000EP MPEG IMX Recorder (with  
Network Interface Board installed)  
MSW-M2000P MPEG IMX Recorder (/1  
model)  
MSW-M2100 MPEG IMX Player (/1 model)

MSW-M2100E MPEG IMX Player (with  
Network Interface Board installed)  
MSW-M2100EP MPEG IMX Player (with  
Network Interface Board installed)  
MSW-M2100P MPEG IMX Player (/1 model)  
PDW-510 XDCAM Camcorder (DVCAM  
Recording)  
PDW-510P XDCAM Camcorder (DVCAM  
Recording)  
PDW-530 XDCAM Camcorder (MPEG  
IMX/DVCAM Recording)  
PDW-530P XDCAM Camcorder (MPEG  
IMX/DVCAM Recording)

### Specifications

IC memory type:  
Flash memory  
Storage capacity:  
32MB/64MB/128MB  
Connector type:  
10-pin connector  
Dimensions:  
Approx. 21.5(W) × 50(H) × 2.8(D) mm  
(7/8 × 2 × 1/8 inches)  
Mass:  
Approx. 4g

## Recording Media

### MSA-A “Memory Stick” IC Memory Media

MSA-4A  
MSA-8A  
MSA-16A  
MSA-32A  
MSA-64A

#### Applicable Models

BVP-E30 3-chip CCD Portable Color Camera  
BVP-E30P 3-chip CCD Portable Color Camera  
BVP-E30WS 3-chip CCD Portable Color Camera  
BVP-E30WSP 3-chip CCD Portable Color Camera  
DSR-250 DVCAM Camcorder  
DSR-250P DVCAM Camcorder  
DSR-PD170 DVCAM Camcorder  
DSR-PD170P DVCAM Camcorder  
DSR-PDX10 DVCAM Camcorder  
DSR-PDX10P DVCAM Camcorder  
HDC-930 Multi-format HD Camera  
HDC-950 Multi-format HD Camera  
HDW-730S HDCAM Camcorder  
HDW-750 HDCAM Camcorder  
HDW-750P HDCAM Camcorder

#### Specifications

IC memory type:  
Flash memory  
Storage capacity:  
8MB/16MB/32MB/64MB  
Connector type:  
10-pin connector  
Dimensions:  
Approx. 21.5(W) × 50(H) × 2.8(D) mm  
(7/8 × 2 × 1/8 inches)  
Mass:  
Approx. 4g

### MSAC-FD Floppy Disc Adaptor for Memory Stick

MSAC-FD2M  
MSAC-FD2MA

#### Features

●Can be used for the  
DSR-250/250P/PD100A/PD100AP/PD150/PD150P

#### Applicable Models

DSR-250 DVCAM Camcorder  
DSR-250P DVCAM Camcorder

### MSAC-PC PC Card Adaptor for Memory Stick

MSAC-PC2

#### Features

●Can be used for the  
DSR-250/250P/PD100A/PD100AP/PD150/PD150P

Recording Media

MSAC-US Memory Stick Reader/Writer

Memory Stick Reader/Writer  
MSAC-US1A  
MSAC-US5

Applicable Models  
DSR-250 DVCAM Camcorder  
DSR-250P DVCAM Camcorder



Recording Media

Cables

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CCA-7 Cables . . . . . 804

CCDC Cables . . . . . 805

CCDC-A Cables . . . . . 805

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CCXC-6P Cables . . . . . 809

CCXC-9DB Cable . . . . . 810

CCXC-9DBS Cable . . . . . 810

CCXC-9DD Cable . . . . . 810

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VMC-IL66 Cables . . . . . 814

Cables

Cables

CCA-5 Cables 8-pin/8-pin Remote Control Cable

CCA-5-10  
CCA-5-3

Applicable Models

CA-570 Camera Adaptor  
CA-570P Camera Adaptor  
CA-590 Camera Adaptor  
CA-590P Camera Adaptor  
CA-905F Large Lens Adaptor (Fischer Type)  
CA-905L Large Lens Adaptor (Lemo Type)  
CA-950 Camera Adaptor  
CA-950P Camera Adaptor  
CCU-590 Portable Camera Control Unit  
CCU-590P Portable Camera Control Unit  
CCU-700A Camera Control Unit  
CCU-700AP Camera Control Unit  
CCU-790 Camera Control Unit  
CCU-790P Camera Control Unit  
CNU-700 Camera Command Network Unit  
HDCU1000 Camera Control Unit  
HDCU1500 Camera Control Unit  
HDCU-900 Camera Control Unit  
HDCU-950 Camera Control Unit  
HDCU-F950 Camera Control Unit  
MSU-700A Master Setup Unit  
MSU-750 Master Setup Unit  
MSU-900 Master Setup Unit  
MSU-950 Master Setup Unit  
RCP-700 Remote Control Panel (Joystick Type)  
RCP-720 Remote Control Panel (Joystick Type)

RCP-750 Remote Control Panel (Joystick type)  
RCP-751 Remote Control Panel (Dial control type)  
RM-B150 Remote Control Unit  
RM-B750 Remote Control Unit  
VCS-700 Video Selector  
VCS-700 Video Selector

Specifications

CCA-5-10:  
10 m (33ft)  
CCA-5-3:  
3 m (10ft)

CCA-7 Cables 10-pin/10-pin Cable

CCA-7-100  
CCA-7-25  
CCA-7-5  
CCA-7-50

Features

●10-pin (male) / 10-pin (female)

Applicable Models

CCU-D50 Camera Control Unit  
CCU-D50P Camera Control Unit  
CCU-TX50 Camera Control Unit  
CCU-TX50P Camera Control Unit  
RCP-D50 Remote Control Panel (Joystick Type)  
RCP-D51 Remote Control Panel (Dial Control Type)

Specifications

CCA-7-5:  
5 m (16.5 ft)  
CCA-7-25:  
25 m (82 ft)  
CCA-7-50:  
50 m (165 ft)  
CCA-7-100:  
100 m (330 ft)



## Cables

### CCDC Cables 12-pin/4-pin DC Cables

CCDC-10  
CCDC-100  
CCDC-25  
CCDC-5  
CCDC-50

#### Features

- 12-pin (female) <->4-pin (male)

#### Applicable Models

DXC-390 3-CCD Color Video Camera  
DXC-390P 3-CCD Color Video Camera  
DXC-990 3-CCD Color Video Camera  
DXC-990P 3-CCD Color Video Camera  
DXC-LS1 CCD Color Video Camera  
DXC-LS1P CCD Color Video Camera

#### Specifications

CCDC-5:

5 m (16.4 ft)

CCDC-10:

10 m (32 ft)

CCDC-25:

25 m (82 ft)



### CCDC-A Cables 12-pin/4-pin Cable

CCDC-100A  
CCDC-50A

#### Features

- 12-pin (female) / 4-pin (male)

#### Applicable Models

DXC-990 3-CCD Color Video Camera  
DXC-990P 3-CCD Color Video Camera

#### Specifications

CCDC-50A:

50 m (164 ft)

CCDC-100A:

100 m (330 ft)



Cables

Cables

CCFC-M100 Optical Fiber Cable

CCFC-M100

Applicable Models  
BRC-300 3-CCD Color Video Camera  
BRU-300 Optical Multiplex Unit

Specifications  
Cable length  
Approx. 100 m



CCFD-L Cables DV Cables (6-pin to 4-pin)

CCFD-3L

Features

- 6-pin to 4-pin

Applicable Models

DSR-11 Recorder  
DSR-1500A Editing Recorder  
DSR-1500AP Editing Recorder  
DSR-1600A DVCAM Editing Player  
DSR-1600AP DVCAM Editing Player  
DSR-1800A DVCAM Editing Recorder  
DSR-1800AP DVCAM Editing Recorder  
DSR-2000A DVCAM Editing Recorder

DSR-2000AP DVCAM Editing Recorder  
DSR-250 DVCAM Camcorder  
DSR-250P DVCAM Camcorder  
DSR-400K DVCAM Camcorder  
DSR-400L DVCAM Camcorder  
DSR-400PK DVCAM Camcorder  
DSR-400PL DVCAM Camcorder  
DSR-450WSL DVCAM Camcorder  
DSR-450WSPL DVCAM Camcorder

DSR-50 Portable Recorder  
DSR-50P Portable Recorder  
DSR-DR1000 Video Disk Recorder  
DSR-DR1000P Video Disk Recorder

CCF-L Cables DV Cables (6-pin to 6-pin)

CCF-3L

Features

- 6-pin to 6-pin

Applicable Models

DSR-1500A Editing Recorder  
DSR-1500AP Editing Recorder  
DSR-1600A DVCAM Editing Player  
DSR-1600AP DVCAM Editing Player  
DSR-1800A DVCAM Editing Recorder  
DSR-1800AP DVCAM Editing Recorder  
DSR-2000A DVCAM Editing Recorder  
DSR-2000AP DVCAM Editing Recorder  
DSR-250 DVCAM Camcorder  
DSR-250P DVCAM Camcorder  
DSR-400K DVCAM Camcorder  
DSR-400L DVCAM Camcorder  
DSR-400PK DVCAM Camcorder  
DSR-400PL DVCAM Camcorder  
DSR-450WSL DVCAM Camcorder  
DSR-450WSPL DVCAM Camcorder  
DSR-50 Portable Recorder  
DSR-50P Portable Recorder  
DSR-DR1000 Video Disk Recorder  
DSR-DR1000P Video Disk Recorder



## Cables

### CCMC-12 Cables 12-pin/12-pin Multi Core Cables

CCMC-12P02  
CCMC-12P05  
CCMC-12P10  
CCMC-12P25

#### Features

- 12-pin (male) <>12-pin (female)

#### Applicable Models

DXC-390 3-CCD Color Video Camera  
DXC-390P 3-CCD Color Video Camera  
DXC-990 3-CCD Color Video Camera  
DXC-990P 3-CCD Color Video Camera  
DXC-LS1 CCD Color Video Camera  
DXC-LS1P CCD Color Video Camera

#### Specifications

CCMC-12P02:

2 m (6.4 ft)

CCMC-12P05:

5 m (16.4 ft)

CCMC-12P10:

10 m (33 ft)

CCMC-12P25:

25 m (82 ft)



### CCMC-16P Cables 16-pin/20-pin Cable

CCMC-16P03  
CCMC-16P10

#### Features

- 16-pin (female) <> 20-pin (female), 10m (33 ft)

#### Applicable Models

DXC-LS1 CCD Color Video Camera  
DXC-LS1P CCD Color Video Camera

#### Specifications

CCMC-16P03 :

3m (10 ft)

CCMC-16P10 :

10m (33 ft)



Cables

## Cables

### CCMC-20 Cables 20-pin/20-pin Cable

CCMC-20P05  
CCMC-20P10  
CCMC-20P30

#### Features

- 20-pin (female) <> 20-pin (female)

#### Applicable Models

DXC-C33 3-CCD Color Video Camera  
DXC-C33P 3-CCD Color Video Camera

#### Specifications

CCMC-20P05:

5 m

CCMC-20P10:

10 m

CCMC-20P30:

30 m



### CCMC-200 Multi cable for CMA-D2

Multi cable for CMA-D2  
CCMC-200  
CCMC-200YC



Cables

### CCMC-3MZ Cable

CCMC-3MZ

#### Features

- For connection of CMA-D3/D3CE, capable of connecting to the CCZ-A2/A5/A10/A25/A50/A100 cables (3 m)

#### Applicable Models

DXC-990 3-CCD Color Video Camera  
DXC-990P 3-CCD Color Video Camera

## Cables

### CCMC-9DS Cable 9-pin/4BNCs, DIN 4-pin

CCMC-9DS

#### Features

- 9-pin D-sub (male) <=> BNCs (R/G/B/SYNC, male), DIN 4-pin (Y/C, male)\* 5 m (16.4 ft)

#### Applicable Models

BRC-300 3-CCD Color Video Camera  
 DXC-390 3-CCD Color Video Camera  
 DXC-390P 3-CCD Color Video Camera  
 DXC-990 3-CCD Color Video Camera  
 DXC-990P 3-CCD Color Video Camera  
 DXC-C33 3-CCD Color Video Camera  
 DXC-C33P 3-CCD Color Video Camera



### CCTZ-3RGB Cable 20-pin/26-pin Cable

CCTZ-3RGB

#### Features

- DXC-950/9000 <=> CCU-M5, 3m (10 ft)\*CCZZ-1E interconnection adaptor is supplied\*It is possible to extend the cable length with CCZ-AM cable\*RGB/VBS output to CCU-M5



### CCXC-12P cables EIAJ 12-pin Cables

CCXC-12P02N  
 CCXC-12P05N  
 CCXC-12P10N  
 CCXC-12P25N

#### Features

- EIAJ 12pin cables

Cables

### CCXC-6P Cables Trigger Cables

CCXC-6P05

#### Features

- Trigger Cables

## Cables

### CCXC-9DB Cable 9-pin/9-pin Cable

CCXC-9DB

#### Features

- RGB Cable, 9-pin male - 5 m

#### Applicable Models

DXC-C33 3-CCD Color Video Camera  
DXC-C33P 3-CCD Color Video Camera

### CCXC-9DBS Cable 9-pin/5BNCs Cable

CCXC-9DBS

#### Features

- 9-pin D-sub (male) <—> BNCs (R/G/B/SYNC/VBS) (male) ●5m (16.4 ft) ●For video output from DXC-H10/950/950P/9000/9100P/390/390P

#### Applicable Models

BRC-300 3-CCD Color Video Camera  
DXC-390 3-CCD Color Video Camera  
DXC-390P 3-CCD Color Video Camera  
DXC-990 3-CCD Color Video Camera  
DXC-990P 3-CCD Color Video Camera



### CCXC-9DD Cable 9-pin/9-pin Cable

CCXC-9DD

#### Features

- 9-pin D-sub (male) <—> 9-pin D-sub (male) ●5m (16.4 ft) ●For video output from DXC-H10/950/950P/9000/9100P/390

#### Applicable Models

DXC-990 3-CCD Color Video Camera  
DXC-990P 3-CCD Color Video Camera  
DXC-C33 3-CCD Color Video Camera  
DXC-C33P 3-CCD Color Video Camera



### CCXC-T20 Cables ccu to CHU cables

CCXC-T20P02

CCXC-T20P05

CCXC-T20P10

#### Specifications

CCXC-T20P02:

2 m

CCXC-T20P05:

5 m

CCXC-T20P10:

10 m

Cables

CCZ cables 26-pin/26-pin Camera Cable

CCZ-10  
CCZ-2

Applicable Models  
AC-550 AC Adaptor  
AC-550CE AC Adaptor  
CA-570 Camera Adaptor  
CA-570P Camera Adaptor  
DSR-50 Portable Recorder  
DSR-50P Portable Recorder

Specifications  
CCZ-2:  
2 m (6.4 ft)  
CCZ-10:  
10 m (33 ft)

CCZ-A Cables 26-pin/26-pin Cable

CCZ-A10  
CCZ-A100  
CCZ-A2  
CCZ-A25  
CCZ-A5  
CCZ-A50

Features  
●26-pin (male) <—> 26-pin (female)



Applicable Models  
CA-D50 Camera Adaptor  
CCU-D50 Camera Control Unit  
CCU-D50P Camera Control Unit  
DXC-390 3-CCD Color Video Camera  
DXC-390P 3-CCD Color Video Camera  
DXC-D50H 3-chip CCD Portable Color Camera  
DXC-D50K 3-chip CCD Portable Color Camera  
DXC-D50L 3-chip CCD Portable Color Camera  
DXC-D50PH 3-chip CCD Portable Color Camera  
DXC-D50PK 3-chip CCD Portable Color Camera  
DXC-D50PL 3-chip CCD Portable Color Camera  
DXC-D50WSH 3-chip CCD Portable Color Camera

DXC-D50WSL 3-chip CCD Portable Color Camera  
DXC-D50WSPL 3-chip CCD Portable Color Camera  
Specifications  
CCZ-A2 :  
2 m (6.5 ft)  
CCZ-A5 :  
5 m (16.5 ft)  
CCZ-A10 :  
10 m (33 ft)  
CCZ-A25 :  
25 m (82 ft)  
CCZ-A50 :  
50 m (164 ft)  
CCZ-A100 :  
100 m (330 ft)

Cables

Cables

RCC-G Cables 9-pin/9-pin Cable

RCC-10G  
RCC-30G  
RCC-5G

Features

●9-pin (male) <—> 9-pin (male)



Applicable Models

BVE-9100 Hybrid Editing Systems  
BVM-14F1E Color Video Monitor  
BVM-14F1U Color Video Monitor  
BVM-14F5E Color Video Monitor  
BVM-14F5U Color Video Monitor  
BVM-20F1E Color Video Monitor  
BVM-20F1U Color Video Monitor  
BVM-D14H1A Color Video Monitor  
BVM-D14H1E Color Video Monitor  
BVM-D14H1U Color Video Monitor  
BVM-D14H5A Color Video Monitor  
BVM-D14H5E Color Video Monitor  
BVM-D14H5U Color Video Monitor  
BVM-D20F1A Color Video Monitor  
BVM-D20F1E Color Video Monitor  
BVM-D20F1U Color Video Monitor  
BVM-D24E1WA Color Video Monitor  
BVM-D24E1WE Color Video Monitor  
BVM-D24E1WU Color Video Monitor  
BVM-D32E1WE Color Video Monitor  
BVM-D32E1WU Color Video Monitor  
BVM-D9H1A Color Video Monitor  
BVM-D9H1E Color Video Monitor  
BVM-D9H1U Color Video Monitor  
BVM-D9H5A Color Video Monitor  
BVM-D9H5E Color Video Monitor  
BVM-D9H5U Color Video Monitor  
DNW-A65 Betacam SX Player  
DNW-A65P Betacam SX Player  
DNW-A75 Betacam SX Recorder  
DNW-A75P Betacam SX Recorder  
DSR-1500A Editing Recorder  
DSR-1500AP Editing Recorder  
DSR-1600A DVCAM Editing Player  
DSR-1600AP DVCAM Editing Player  
DSR-1800A DVCAM Editing Recorder  
DSR-1800AP DVCAM Editing Recorder  
DSR-2000A DVCAM Editing Recorder  
DSR-2000AP DVCAM Editing Recorder  
DSR-DR1000 Video Disk Recorder  
DSR-DR1000P Video Disk Recorder  
DVW-2000 Digital Betacam Recorder  
DVW-2000P Digital Betacam Recorder  
DVW-M2000 Digital Betacam Recorder  
DVW-M2000P Digital Betacam Recorder  
HDW-2000 HDCAM VTR  
HDW-D2000 HDCAM Recorder  
HDW-M2000 HDCAM VTR  
HDW-M2000P HDCAM VTR  
HDW-M2100 HDCAM Player  
HDW-M2100P HDCAM Player  
HDW-S2000 HDCAM Recorder  
HDW-S2000P HDCAM Recorder  
HDW-S280 HDCAM Compact Recorder  
MSW-2000 MPEG IMX Recorder  
MSW-A2000 MPEG IMX Recorder (/1 model)

MSW-A2000P MPEG IMX Recorder (/1 model)  
MSW-M2000 MPEG IMX Recorder (/1 model)  
MSW-M2000E MPEG IMX Recorder (with  
Network Interface Board installed)  
MSW-M2000EP MPEG IMX Recorder (with  
Network Interface Board installed)  
MSW-M2000P MPEG IMX Recorder (/1  
model)  
MSW-M2100 MPEG IMX Player (/1 model)  
MSW-M2100E MPEG IMX Player (with  
Network Interface Board installed)  
MSW-M2100EP MPEG IMX Player (with  
Network Interface Board installed)  
MSW-M2100P MPEG IMX Player (/1 model)  
PDW-1500 XDCAM Compact Deck  
(Recording and Playback)

Specifications

RCC-5G :  
5 m (16 ft)  
RCC-10G :  
10 m (33 ft)  
RCC-30G :  
30 m (99 ft)

Cables

VMC-IL44 Cables i.LINK Cable (4-pin to 4-pin)

VMC-IL4415  
VMC-IL4435

Applicable Models

- DSR-11 Recorder
- DSR-25 Recorder
- DSR-45 Recorder
- DSR-45P Recorder
- DSR-PD170 DVCAM Camcorder
- DSR-PD170P DVCAM Camcorder
- DSR-PDX10 DVCAM Camcorder
- DSR-PDX10P DVCAM Camcorder
- HVR-M10N HDV 1080i VTR
- HVR-M10P HDV 1080i VTR
- HVR-Z1N HDV 1080i Camcorder
- HVR-Z1P HDV 1080i Camcorder

Specifications

- VMC-IL4415:
  - 1.5 m(5 ft)
- VMC-IL4435:
  - 3.5 m(12 ft)



VMC-IL4415

VMC-IL46 Cables i.LINK Cable (4-pin to 6-pin)

VMC-IL4615  
VMC-IL4635

Applicable Models

- DSR-11 Recorder
- DSR-25 Recorder
- DSR-250 DVCAM Camcorder
- DSR-250P DVCAM Camcorder
- DSR-45 Recorder
- DSR-45P Recorder
- DSR-50 Portable Recorder
- DSR-50P Portable Recorder
- DSR-PD170 DVCAM Camcorder
- DSR-PD170P DVCAM Camcorder
- DSR-PDX10 DVCAM Camcorder
- DSR-PDX10P DVCAM Camcorder
- DXC-C33 3-CCD Color Video Camera
- DXC-C33P 3-CCD Color Video Camera
- HVR-M10N HDV 1080i VTR
- HVR-M10P HDV 1080i VTR
- HVR-Z1N HDV 1080i Camcorder
- HVR-Z1P HDV 1080i Camcorder

- PDW-1500 XDCAM Compact Deck (Recording and Playback)
- PDW-510 XDCAM Camcorder (DVCAM Recording)
- PDW-510P XDCAM Camcorder (DVCAM Recording)
- PDW-530 XDCAM Camcorder (MPEG IMX/DVCAM Recording)
- PDW-530P XDCAM Camcorder (MPEG IMX/DVCAM Recording)
- PDW-D1 XDCAM Drive Unit
- PDW-V1 XDCAM Mobile Deck (Playback and File Recording)

Specifications

- VMC-IL4615:
  - 1.5 m(5 ft)
- VMC-IL4635:
  - 3.5 m(12 ft)



VMC-IL4615

Cables

Cables

VMC-IL66 Cables i.LINK Cable (6-pin to 6-pin)

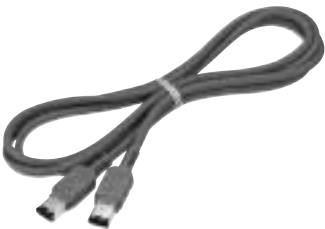
VMC-IL6615  
VMC-IL6635

Applicable Models  
DSR-250 DVCAM Camcorder  
DSR-250P DVCAM Camcorder  
DSR-50 Portable Recorder  
DSR-50P Portable Recorder  
DXC-C33 3-CCD Color Video Camera  
DXC-C33P 3-CCD Color Video Camera  
PDW-1500 XDCAM Compact Deck  
(Recording and Playback)  
PDW-510 XDCAM Camcorder (DVCAM  
Recording)  
PDW-510P XDCAM Camcorder (DVCAM  
Recording)  
PDW-530 XDCAM Camcorder (MPEG  
IMX/DVCAM Recording)  
PDW-530P XDCAM Camcorder (MPEG  
IMX/DVCAM Recording)  
PDW-D1 XDCAM Drive Unit  
PDW-V1 XDCAM Mobile Deck (Playback and  
File Recording)

Specifications

VMC-IL6615:  
1.5 m(5 ft)

VMC-IL6635:  
3.5 m(12 ft)



VMC-IL6615



Cables

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WRR-802A	.740,741
WRR-855A	.742,743,744
WRR-855B	.745,746
WRR-861B	.747,748
WRR-862B	.749,750
WRT-807B	.751
WRT-808A	.752,753
WRT-822A	.754,755,756
WRT-822B	.757,758
WRT-847B	.759,760
WRT-867A	.761
WRT-8B	.762,763
WRU-806B	.764
WRU-8N	.765

### XDCAM Camcorders

PDW-510	.172
PDW-510P	.174
PDW-530	.168
PDW-530P	.170

### XDCAM Decks

PDJ-C1080	.316
PDW-1500	.312
PDW-D1	.315
PDW-V1	.314

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